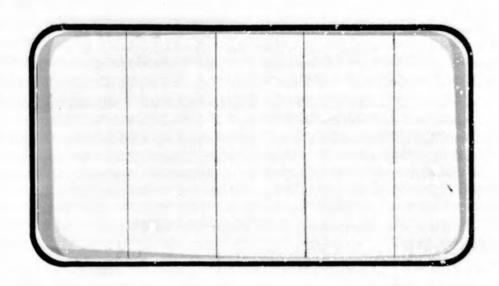# General Disclaimer

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT

JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA MANagement services

SPACE DIVISION **CHRYSLER** CORPORATION

April, 1976

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VOLUME 2 OF 5

RESULTS OF AN AERODYNAMIC INVESTIGATION OF A

SPACE SHUTTLE ORBITER/747 CARRIER FLIGHT TEST

CONFIGURATION TO DETERMINE SEPARATION CHARACTERISTICS

UTILIZING 0.0125-SCALE MODELS (48-0/AX1318I-1) IN

THE LTV 4 x 4-FOOT HIGH SPEED WIND TUNNEL (CA26)

by

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by

Data Management Services
Chrysler Corporation Space Division
New Orleans, La. 70189

for

Engineering Analysis Division

Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number: LTV HSWT 559
NASA Series Number: CA26
Model Number: 48-0 Orbiter/AX1318I-1 747
Test Dates: August 1 through August 15, 1975
Occupancy Hours: 95

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ABSTRACT

This report presents results of tests conducted on a 0.0125-scale model of the VC70-000002 Space Shuttle Orbiter and a 0.0125-scale model of the 747 CAM configuration in the LTV 4 x 4-foot High Speed Wind Tunnel. Force and moment data were obtained for each vehicle separately at a Mach number of 0.6 and for each vehicle in proximity to the other at Mach numbers of 0.3, 0.5, 0.6 and 0.7.

The enclosed data present the proximity effects of each vehicle on the other at separation distances (from the mated configuration) ranging from 1.5 feet to 75 feet; 747 Carrier angles of attack from 0 degrees to 6 degrees and angles of sideslip of 0° and -5° were tested. The Orbiter was tested in proximity to the 747 at incidence angles of 4 degrees, 6 degrees and 8 degrees and angles of sideslip of 0 degrees and ± 5 degrees. The Orbiter alone was tested at angles of attack from 0 degrees to 17 degrees at angles of sideslip of 0 degrees and -5 degrees.

ABSTRACT (Concluded)

Model variables include orbiter elevon, aileron and body flap deflections, orbiter tailcone on and off, and 747 stabilizer and rudder deflections. The tests, designated CA26, were conducted from August 1 through August 15, 1975.

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(B) CN, CLM, CA, CY, CYN, CBL, CL, CD versus ALPHAC

(C) CN, CLM, CA, CY, CYN, CBL, CL, CD versus DZ

(D) CN, CLM, CA, CY, CYN, CBL, CL, CD versus DX

(E) CN, CLM, CA, CY, CYN, CBL, CL, CD versus DY

(F) CN, CLM, CA, CY, CYN, CBL, CL, CD versus ALPHAO

(G) CN, CLM, CA, CY, CYN, CBL, CL, CD versus INCID

NOMENCLATURE
General

SYMBOL	PLOT SYMBOL	DEFINITION
a		speed of sound; m/sec, ft/sec
C_p	CP	pressure coefficient; $(p_l - p_\infty)/q$
M	MACH	Mach number; V/a
p		pressure; N/m^2, psf
q	Q(NSM) Q(PSF)	dynamic pressure; $1/2\rho V^2$, N/m^2, psf
RN/L	RN/L	unit Reynolds number; per m, per ft
V		velocity; m/sec, ft/sec
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
ϕ	PHI	angle of roll, degrees
ρ		mass density; kg/m^3, $slugs/ft^3$

Reference & C.G. Definitions

A_b		base area; m^2, ft^2
b	BREF	wing span or reference span; m, ft
c.g.		center of gravity
ℓ_{REF} $\bar{c}$	LREF	reference length or wing mean aerodynamic chord; m, ft
S	SREF	wing area or reference area; m^2, ft^2
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis

SUBSCRIPTS

b	base
l	local
s	static conditions
t	total conditions
∞	free stream
w	wing

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Body-Axis System

SYMBOL	PLOT SYMBOL	DEFINITION
C_N	CN	normal-force coefficient; $\dfrac{\text{normal force}}{qS}$
C_A	CA	axial-force coefficient; $\dfrac{\text{axial force}}{qS}$
C_Y	CY	side-force coefficient; $\dfrac{\text{side force}}{qS}$
C_{A_b}	CAB	base-force coefficient; $\dfrac{\text{base force}}{qS}$ $-A_b(p_b - p_\infty)/qS$
C_{A_f}	CAF	forebody axial force coefficient, $C_A - C_{A_b}$
C_m	CLM	pitching-moment coefficient; $\dfrac{\text{pitching moment}}{qS\ell_{REF}}$
C_n	CYN	yawing-moment coefficient; $\dfrac{\text{yawing moment}}{qSb}$
C_ℓ	CBL	rolling-moment coefficient; $\dfrac{\text{rolling moment}}{qSb}$

Stability-Axis System

SYMBOL	PLOT SYMBOL	DEFINITION
C_L	CL	lift coefficient; $\dfrac{\text{lift}}{qS}$
C_D	CD	drag coefficient; $\dfrac{\text{drag}}{qS}$
C_{D_b}	CDB	base-drag coefficient; $\dfrac{\text{base drag}}{qS}$
C_{D_f}	CDF	forebody drag coefficient; $C_D - C_{D_b}$
C_Y	CY	side-force coefficient; $\dfrac{\text{side force}}{qS}$
C_m	CLM	pitching-moment coefficient; $\dfrac{\text{pitching moment}}{qS\ell_{REF}}$
C_n	CLN	yawing-moment coefficient; $\dfrac{\text{yawing moment}}{qSb}$
C_ℓ	CSL	rolling-moment coefficient; $\dfrac{\text{rolling moment}}{qSb}$
L/D	L/D	lift-to-drag ratio; C_L/C_D
L/D_f	L/DF	lift to forebody drag ratio; C_L/C_{D_f}

SYMBOL	PLOT SYMBOL	DEFINITION
BSTA		Longitudinal carrier station, in.
BWL		Vertical carrier station, in.
BL		Lateral carrier station, in.
δ_a	AILRON	Orbiter aileron deflection angle, $\delta_a = \dfrac{\delta_{eL} - \delta_{eR}}{2}$, degrees
δ_{BF}	BDFLAP	Orbiter body flap surface deflection angle, positive deflection trailing edge down, degrees
δ_e	ELEVON	Orbiter elevon surface deflection angle, positive deflection trailing edge down, degrees
δ_r	RUDDER	747 rudder surface deflection angle, positive deflection trailing edge to the left, degrees
δ_s	STAB	747 stabilizer surface deflection angle, positive deflection trailing edge down, degrees
C_{y_β}	CYB	Side force coefficient due to beta
C_{n_β}	CYNB	Yawing moment coefficient due to beta
C_{ℓ_β}	CLB	Rolling moment coefficient due to beta
$\Delta C_{P_{S_\beta}}$	DCPSB	Differential right hand and left hand strut pressure coefficient due to beta

ORBITER

SYMBOL	PLOT SYMBOL	DEFINITION
$C_{P_{B1}}$	CPB1	Orbiter (tail cone off) base pressure coefficient, 1
$C_{P_{B2}}$	CPB2	Orbiter (tail cone off) base pressure coefficient, 2
$C_{P_{B3}}$	CPB3	Orbiter (tail cone off) base pressure coefficient, 3

SYMBOL	PLOT SYMBOL	DEFINITION
$c_{P_{CO}}$	CPCO	Orbiter balance cavity pressure coefficient
$c_{P_{S1}}$	CPS1	Orbiter strut L. H. side pressure coefficient
$c_{P_{S2}}$	CPS2	Orbiter strut R. H. side pressure coefficient
$c_{P_{CC}}$	CPCC	747 cavity pressure coefficient
$c_{P_{SB1}}$	CPSB1	747 upper forward sting cavity pressure coefficient
$c_{P_{SB2}}$	CPSB2	747 upper center sting cavity pressure coefficient
$c_{P_{SB3}}$	CPSB3	747 upper aft sting cavity exit pressure coefficient

SEPARATION PARAMETERS

SYMBOL	PLOT SYMBOL	DEFINITION
Δx	DELX	Orbiter longitudinal displacement from mated position, positive aft, feet
Δy	DELY	Orbiter lateral displacement from mated position, positive right, feet
Δz	DELZ	Orbiter vertical displacement from mated position, positive up, feet
$\Delta \phi$	DPHI DELPHI	Incremental roll angle, Orbiter FRP, degrees
i_O	IORB	Orbiter incidence angle, orbiter FRL to 747 FRL ($i_O = \alpha_O - \alpha_C$), degrees
	INCID	Orbiter incidence angle (accounts for tunnel flow angularity variation from tunnel $\cent$ to tunnel wall) $i_O = \alpha_O - \alpha_C - \Delta Z(-.0059)$, degrees
α_O	ALPHAO	Orbiter angle of attack (tunnel flow angularity from tunnel $\cent$ to tunnel wall not applied), degrees
α_C	ALPHAC	Carrier FRL angle of attack, degrees
$\Delta \beta$	DELBETA	Incremental sideslip angle, orbiter to 747 FRL, degrees

REMARKS

The model component surface deflection angles called out in the run summary are nominal values. The actual angles tested are outlined below.

	Nominal	Actual
Orbiter Elevon:	0°	0°
	$+5^{o}$	$+5.0^{o}$
	$+10^{o}$	$+9.8^{o}$
Orbiter Aileron: ($\delta_e = 5, \delta_a = -5$)	$0^{o}/10^{o}$	$0^{o}/+9.8^{o}$
747 Stabilizer:	-1°	-0.75^{o}
	$+3^{o}$	3.27^{o}
	$+5^{o}$	5.32^{o}
747 Rudder:	$+10^{o}$	$+10.7^{o}$

During the early separation Δz sweep runs, it was noted that for Δz in the 0 to 15 foot range, the coefficient polars had different character-istics for Δz decreasing than for Δz increasing. Subsequent pitch/pause data runs demonstrated that there was a proximity hysterisis effect. All runs thereafter were made with pitch/pause points in close proximity and constant sweep beyond 10 feet.

CONFIGURATIONS INVESTIGATED

The orbiter model, 48-O, was an 0.0125-scale representation of the Space Shuttle Orbiter VC70-000002 lines, illustrated in figure 2a. The Orbiter model was tested both with and without a tail cone fairing which covered the MPS nozzles and the OMS pod base as shown in figure 2b. Orbiter alone runs were made with a base sting mount, the sting replacing the upper MPS nozzle, figure 2h. The following orbiter configurations were tested:

$$O_2 = B_{64} \, C_{14} \, F_{14} \, E_{44} \, M_{18} \, N_{94} \, N_{92} \, W_{116}$$

$$O_4 = B_{64} \, C_{14} \, F_{14} \, E_{44} \, M_{18} \, N_{105} \, N_{92} \, R_{18} \, V_{23} \, W_{116} \text{ (upper MPS nozzle off)}$$

$$O_6 = B_{64} \, C_{14} \, F_{14} \, E_{44} \, M_{18} \, W_{116} \, TC_4$$

where:

Component	Description
B_{64}	Orbiter fuselage per Rockwell lines VC70-000002, Model drawing SS-A01377
C_{14}	Orbiter canopy per Rockwell lines VC70-000002, Model drawing SS-A01377
E_{44}	Orbiter full span, unswept hingeline, 6-inch gapped elevons per Rockwell lines VC70-000002, Model drawing SS-A01377
F_{14}	Orbiter body flap per Rockwell lines VC70-000002, Model drawing SS-A01377
M_{18}	Orbiter OMS/RCS pods per Rockwell lines VC70-000002, Model drawing SS-A01377
N_{92}	Orbiter OMS engine nozzles per Rockwell lines VC70-000002, Model drawing SS-A01377
N_{94}	Orbiter main engine nozzles per Rockwell lines VC70-00002, Model drawing SS-A01377
N_{105}	Same as N_{94} with upper nozzle removed

CONFIGURATIONS INVESTIGATED - (Continued)

Component	Description
R_{18}	Orbiter rudder per Rockwell lines VC70-000002, Model drawing SS-A01377
V_{23}	Orbiter vertical tail per Rockwell lines VC70-000002, Model drawing SS-A01377
W_{116}	Orbiter double delta wing per Rockwell lines VC70-000002, Model drawing SS-A01377
TC_4	Orbiter tail cone fairing which covers the MPS nozzles and the OMS nozzles and base

Orbiter elevon, aileron and body flap deflection angles were varied.
Configuration O_4 was the sting mounted orbiter configuration, and O_2 and O_6 were blade mounted configurations.

Orbiter-to-carrier attach structure was simulated. These included faired and unfaired strut members as identified below and illustrated in figures 2f and 2g.

$$AT_y = AT_{112} + AT_{113}$$

$$AT_x = AT_{96} + AT_{99}$$

where:

Component	Description
AT_{112}	Fwd. attach structure, short fairing, $i_o = 4^o$
AT_{113}	Aft attach structure, unfaired draglink, other members faired
AT_{96}	Fwd attach structure, faired, $i_o = 4^o$
AT_{99}	Aft attach structure, faired

CONFIGURATIONS INVESTIGATED - (Concluded)

The carrier model, AX1318I-1, was an 0.0125-scale representation of the Boeing 747-100 aircraft with surface contours built to represent the 747 under loads it would experience with a 600,000 pound gross weight flying at Mach 0.86 at an altitude of 5,000 feet. The CAM (Carrier Aircraft Modification) kit tested on the model included 200 square foot tip fins on the horizontal tail panels and simulated orbiter-to-carrier attach structure. In-flight speed brakes were deployed for most runs in the configuration shown in figure 2e. Stabilizer and rudder deflections were varied during the test. The carrier was tested both isolated and in proximity to the orbiter. Configurations investigated were:

$747/1 = B_{27.8} \, W_{44.1} \, V_{9.1} \, H_{15.6} \, M_{25} \, M_{26} \, N_{57} \, N_{58} \, S_{1-12} \, T_{14} \, AT(\quad)$

$747/4$ = Same as $747/1$ except no $H_{15.6}$

where:

Component	Description
$B_{27.8}$	Fuselage
$W_{44.1}$	Wing
$V_{9.1}$	Vertical Tail
H_{15}	Horizontal tail, basic
$H_{15.6}$	Horizontal tail, with 200 ft.^{2} tip fins
M_{25}	Inboard nacelle struts
M_{26}	Outboard nacelle struts
N_{57}	Inboard nacelles
N_{58}	Outboard nacelles
S_{1-12}	Spoiler Panels
T_{14}	Flap track fairings

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INSTRUMENTATION

Force instrumentation consisted of a six-component internal force balance mounted in each model. The orbiter balance measured orbiter forces and the carrier balance measured carrier data.

Pressure instrumentation for the orbiter consisted of 3 base pressure orifices (tailcone off only) and 1 balance cavity orifice. Pressure instrumentation for the carrier consisted of 1 balance cavity orifice and 3 sting/boattail cavity pressure orifices as shown below. Also, see figure 2k. All pressures were measured by individual pressure transducers.

	Pressure
Orbiter pressures:	PC_O
	PB_1
	PB_2
	PB_3
Carrier pressures:	PCC
	PSB1
	PSB2
	PSB3
Strut pressures:	PS1
	PS2
Tailcone pressure:	PTC

TEST FACILITY DESCRIPTION

The Vought Aeronautics Company High Speed Wind Tunnel is a blowdown-to-atmosphere, transonic-supersonic adjustable Mach number facility.

Six tanks with a total of 28,000 cubic feet air storage capacity receive the reheated air until a maximum storage pressure of 600 psia is reached. The compressor discharge is then vented to atmosphere until the tank pressure is reduced below 400 psia. An alumina pebble bed in each tank absorbs heat during pump up and dissipates heat during air discharge to maintain a near constant supply temperature.

The time required to recharge the air storage tanks following a run varies from 15 to 45 minutes depending upon the final tank pressure. A nominal tank pressure increase rate is 9 psi per minute.

Mach number control at the supersonic test section velocities is accomplished with an adjustable contour nozzle. Two flexible stainless steel plates, 3/4-inch thick, 48 inches wide, and 453 inches long, are contoured to produce a uniform test section flow using 28 nozzle jacks on each plate spaced at 10- to 18-inch intervals. During nozzle changes the plates are hydraulically extended to permit positioning of the threaded nozzle jacks. After the nozzle jacks are properly set, the plates are retracted against the nozzle jack stops. Microswitches on the stops indicate plate contact. Strain indicators at each jack position protect the nozzle plate from excessive stresses.

During each run the hydraulic cylinders are charged with high pressure to hold each plate support rigidly against the nozzle jack stops.

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For transonic operation the supersonic diffuser is removed and the transonic test section and ejector section are set in place. The model cart is relocated downstream approximately 11 feet into the transonic test section. Test section window locations relative to the model cart are the same for either section. Conversion time is nominally 2 hours.

The transonic test section has normal hole perforated walls with 22.5% porosity. Test section size is nominal 4 x 4 feet with each side wall converged 25 minutes. Subsonic Mach number control is accomplished with hydraulic servo-actuated choking flaps downstream of the test section. A control system maintains the preset ratio of static to total pressure during each run by causing small changes in choking area. Above Mach number 0.9, approximately, the choking flaps are fully open and Mach control is switched to a set of plenum chamber bleed control flaps. These hydraulically-actuated, servo-controlled "Mach flaps" remove test section air through the porous walls by ejection pumping of the plenum chamber. A maximum Mach number of 1.15 can be attained with a sonic nozzle. To obtain Mach numbers greater than 1.5, it is necessary to contour the nozzle plates in addition to utilizing plenum pumping. A maximum Mach number of 1.8 is possible in the transonic test section, although the supersonic test section is recommended for Mach numbers of 1.4 and greater.

DATA REDUCTION

Force and moment data were reduced in both body and stability axes using standard data reduction procedures. Coefficient data for each vehicle were computed based on their respective reference dimensions. Separation distances Δx, Δy, and Δz were computed in the carrier body axis system and represent the movement of the orbiter from the base (mated) position.

	Carrier		Orbiter		
Symbol	Model Scale	Full Scale	Model Scale	Full Scale	Description
S	0.859	5500	0.420	2690	reference area, ft.^{2}
b	29.351	2348.04	11.709	936.68	reference span, in.
$\bar{c}$	4.097	327.78	5.935	474.81	reference MAC, in.
MRC					moment reference center, in.
X_c or X_o	16.749	1339.90	13.862	1109	
Y_c or Y_o	0.0	0.0	0.0	0.0	
Z_c or Z_o	2.385	190.75	4.687	375	

No base or cavity pressure corrections were applied to the data.

Wind tunnel data were interpolated versus angle of attack, angle of sideslip, orbiter incidence angle and separation distances Δx, Δy and Δz. Both basic and interpolated data are presented in this report.

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SS-A01378, "Model Installation - 0.0125-Scale SSV Orbiter Ferry/Separation
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SS-A01559, "Fwd and Aft attach Supports, 48-0, 0.0125-Scale SSV Orbiter,
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747-MD-461, "General Arrangement - 747 Space Shuttle Orbiter Carrier
Aircraft (Piggyback Configuration)," July 15, 1974

747-MD-654, "Forward Support Structure Instl. -747 CAM"

747-MD-658, "Support Structure Instl. -Aft"

AX 1318I-1, "747 Model Drawings 0.0125-Scale."

65C13609, "Model Assy AX1318I-1"

65-89588, "Body Lines AX1318I-1"

TABLE I.

TEST CONDITIONS

MACH NUMBER	REYNOLDS NUMBER (per unit length)	DYNAMIC PRESSURE PSF	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.3	2.6×10^6/ft	200	119
0.5	4.0×10^6/ft	445	115
0.6	$4.3\text{-}4.9 \times 10^6$/ft	570 - 625	89 - 132
0.7	5.1×10^6/ft	720	96

BALANCE UTILIZED: Orbiter: Task 1.0-inch MK XIV
Carrier: LTV 1.5-inch VB-21

CAPACITY:

	Orbiter	Carrier	Accuracy
NF	800 lb.	1000 lb.	0.2%
SF	400 lb.	800 lb.	0.2%
AF	100 lb.	200 lb.	0.2%
PM		1000 in.-lb.	0.2%
RM	250 in.-lb.	400 in.-lb.	0.2%
YM		1200 in.-lb.	0.2%

COMMENTS:

TABLE II

| TEST: CA26 | DATA SET/RUN NUMBER COLLATION SUMMARY | DATE: POST TEST |

DATA SET IDENTIFIER	CONFIGURATION	CARRIER				ORBITER									MACH NUMBERS		
		α	β	δ_A	δ_r	δ_e	δ_{BF}	δ_a	Δx	Δy	Δz	α_0	β_0	ϕ_0			0.6
AFE001	O4*					0	0	0				[2]	0	0			1
02						0	16.3	0				[2]	0	0			2
03						5	0	0				[2]	0	0			4.1
04						5	0	0				[2]	-5	0			4.2
05	O2S1					5	0	0				[2]	0	0			7.1
06						5	0	0				[2]	-5	0			7.2
07						5	0	0			[X]	8	0	0			8
08						0	0	0				[2]	0	0			9
09						0	16.3	0				[2]	0	0			10
10						0	-11.7	0				[2]	0	0			11
11						0	5	0				[2]	0	0			12
12	O6S1					0	-11.7	0				[2]	0	0			14
13						0	-11.7	0				[2]	-5	0			15
14						5	-11.7	0				[2]	0	0			16.1
15						5	-11.7	0				[2]	-5	0			16.2

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TEST RUN NUMBERS

COEFFICIENTS

| 1 | 7 | 13 | 19 | 25 | 31 | 37 | 43 | 49 | 55 | 61 | 67 | 75 76 |

IDVAR(1)   IDVAR(2)   NDV

α OR β SCHEDULES

[2] $\alpha_0 = 0°$ to $16°$

[X] $z = 0$ to 72 feet

SEE PAGE 46 FOR COEFFICIENT SCHEDULE

* STING MOUNTED

NASA-MSFC-MAF

TABLE II (Continued)

TEST: CA26		DATA SET/RUN NUMBER COLLATION SUMMARY															DATE: POST TEST	

DATA SET IDENTIFIER	CONFIGURATION	CARRIER				ORBITER											MACH NUMBERS 0.6
		α	β	δ_a	δ_r	δ_e	δ_{BF}	δ_a	Δx	Δy	Δz	α_0	β_0	ϕ_0			
RFE016	747/1 ATY	0	0	5	0												17
17		2	0	5	0												25.1
18		4	0	5	0												24
19		5.5	0	5	0												29
20		0	0	-1	0												18
21		2	0	-1	0												27
22		4	0	-1	0												23
23		2	-5	5	0												28
24		2	0	5	0						⟁						25.2
25		2	0	5	0				⟁Z								25.3
26	747/1	0	0	-1	0												19
27		0	0	3	0												21
28		0	0	5	0												20
29	747/4	0	0	-	0												22

COEFFICIENTS

α or β SCHEDULES

⟁ Z = 0 to 53 feet
⟁Z X = 0 to 40 feet

IDVAR(1)   IDVAR(2)   NDV

NASA-MSFC-MAF

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TEST RUN NUMBERS

TABLE II (Continued)

TEST: CAZ6									DATA SET/RUN NUMBER COLLATION SUMMARY						DATE: POST TEST			

DATA SET IDENTIFIER	CONFIGURATION	CARRIER				ORBITER									MACH NUMBERS			
		α	β	δ_A	δ_r	δ_e	δ_{BF}	δ_a	ΔX	ΔY	ΔZ	ι_o	β_o	ϕ_o	0.3	0.5	0.6	0.7
R/AFE030	747/1 ATy Ø2S1	0	0	5	0	5	-11.7	0	0	0	$\triangle 3^1$	4	0	0			30.1	
31											$\triangle 3^2$	6					30.2	
32											$\triangle 3^1$	6					30.3	
33											$\triangle 3^3$	6					34.2	
34											$\triangle 3^1$	8					31	
35		0	0	5	0	5	-11.7	0	0	0	$\triangle 3^1$	4	5	0			33.1	
36											$\triangle 3^1$	6					33.2	
37											$\triangle 3^1$	8					34.1	
38		0	0	-1	0	5	-11.7	0	0	0	$\triangle 3^1$	4	0	0			35.1	
39											$\triangle 3^1$	6					35.2	
40											$\triangle 3^1$	8					36	
41		2	0	-1	0	5	-11.7	0	0	0	$\triangle 3^4$	4	0	0			37.1	
42											$\triangle 3^3$	6					37.2	
43	NO DATA AVAILABLE										$\triangle 3^4$	8					38.1	
44	NO DATA AVAIL HERE										$\triangle 3^3$	8					38.2	
45		2	0	5	0	5	-11.7	0	0	0	$\triangle 3$	4	0	0			39.1	
46											$\triangle 3$	6				44	43	39.2	42
47											$\triangle 3$	8					40.1	

COEFFICIENTS

α OR β SCHEDULES

$\triangle 3^1$ ΔZ increasing, no pauses
$\triangle 3^2$ ΔZ decreasing, no pauses
$\triangle 3^3$ ΔZ increasing, with pauses
$\triangle 3^4$ ΔZ decreasing, with pauses
$\triangle 3$ ΔZ increasing & decreasing, with pauses

IDVAR(1)   IDVAR(2)   NDV

NASA-MSFC-MAF

TEST RUN NUMBERS

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TABLE II (Continued)

TEST:	CA26				DATA SET/RUN NUMBER COLLATION SUMMARY							DATE: POST TEST		

DATA SET IDENTIFIER	CONFIGURATION	CARRIER				ORBITER									MACH NUMBERS 0.6
		a	β	δ_a	δ_r	δ_e	δ_{BF}	δ_a	ΔX	ΔY	ΔZ	i_o	β_o	ϕ_o	
R/AFE048	747/1 ATY Φ2S1	2	0	5	0	5	0	0	0	0	⟨3⟩	4	5	0	41.1
49											⟨3⟩	6			41.2
50											⟨3⟩	8			-10.c
51	747/1 ATX Φ2S1	2	0	5	0	5	0	0	0	0	⟨3⟩	4	0	0	45.1
52											⟨3⟩	6			45.2
53	747/1 ATY Φ2S1	2	0	5	0	5	0	0	0	⟨4⟩	0	6	0	0	46.1
54											15				46.2
55											60				46.3
56		2	0	5	0	5	0	0	0	⟨4⟩	0	6	5	0	47.1
57											15				47.2
58											60				47.3
59		2	0	5	0	5	0	0	10	⟨4⟩	0	6	0	0	48.1
60											15				48.2
61											60				48.3
62		2	0	5	0	5	0	0	⟨5⟩	0	0	6	0	0	49.1
63											15				49.2
64											60				49.3

COEFFICIENTS

⟨4⟩ ΔY = -10 to 10 feet

⟨5⟩ ΔX = 0 to 20 feet

α OR β SCHEDULES

IDVAR(1)   IDVAR(2)   NDV

NASA-MSFC-MAF

TABLE II (Continued)

DATA SET IDENTIFIER	CONFIGURATION	CARRIER				ORBITER											MACH NUMBERS
		α	β	δ_A	δ_r	δ_e	δ_{BF}	δ_a	ΔX	ΔY	ΔZ	i_o	β_o	ϕ_o			0.6
R/AFE065	747/1 ATY Ø2 S1	2	0	5	0	5	0	0	△5	0	0	6	5	0			50.1
66											15						50.2
67											60						50.3
68		2	0	5	0	0	16.3	0	0	0	△3	4	0	0			51.1
69												6					51.2
70												8					52
71		2	0	5	0	0	5	0	0	0	△3	4	0	0			53.1
72												6					53.2
73												8					54
74		2	0	5	0	0	0	0	0	0	△3	4	0	0			55.1
75												6					55.2
76												8					56
77		2	0	5	0	10	0	0	0	0	△3	6	0	0			57
78		2	0	5	0	5	0	-5	0	0	△3	6	0	0			58
79		2	0	5	10	5	0	0	0	0	△3	6	0	0			59
80		2	-5	5	0	5	0	0	0	0	△3	4	-5	0			60.1
81												6					60.2
82												8					61

COEFFICIENTS

α OR β SCHEDULES

IDVAR(1)   IDVAR(2)   NDV

NASA-MSFC-MAF

TABLE II (Continued)

TEST: CA26							DATA SET/RUN NUMBER COLLATION SUMMARY							DATE: POST TEST	

DATA SET IDENTIFIER	CONFIGURATION	CARRIER				ORBITER									MACH NUMBERS
		α	β	δ_A	δ_r	δ_e	δ_{BF}	δ_a	ΔX	ΔY	ΔZ	i_o	β_o	ϕ_o	0.6
R/AFE083	747/1 ATY Φ2S1	2	-5	5	0	5	0	0	⑤	0	0	6	0	0	62.1
84											15				62.2
85											60				62.3
86		2	5	5	0	5	0	0	0	△4	0	6	0	0	63.1
87											15				63.2
88											60				63.3
89		4	0	5	0	5	0	0	0	0	△3	4	0	0	64.1
90												6			64.2
91												8			65
92		4	0	5	0	5	0	0	0	0	△3	4	5	0	66.1
93												6			66.2
94												8			67
95		4	0	-1	0	5	0	0	0	0	△3	4	0	0	68.1
96												6			68.2
97												8			69
98		4	0	5	0	0	0	0	0	0	△3	4	0	0	70.1
99												6			70.2
100												8			71

1   7   13   19   25   31   37   43   49   55   61   67   75 76

COEFFICIENTS   IDVAR(1)   IDVAR(2)   NDV

α OR β SCHEDULES

TEST RUN NUMBERS

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TABLE II (Continued)

| TEST: CA 26 | DATA SET/RUN NUMBER COLLATION SUMMARY | | | | | | | | | | | | | | DATE: POST TEST | |

DATA SET IDENTIFIER	CONFIGURATION	CARRIER				ORBITER									MACH NUMBERS	
		α	β	δ_e	δ_r	δ_e	δ_{BF}	δ_a	Δx	Δy	Δz	i_o	β_o	ϕ_o		0.6
R/AFE 101	747/1 ATY Φ2S1	4	-5	5	0	5	0	0	0	0	⟨3⟩	4	-5	0		72.1
102												6				72.2
103												8				73
104		5.5	0	5	0	5	0	0	0	0	⟨3⟩	6	0	0		74
105		0	-5	5	0	5	0	0	0	0	⟨3⟩	4	-5	0		75.1
106												6				75.2
107												8				76
108	747/1 ATY Φ6S1	2	0	5	0	5	-11.7	0	0	0	⟨3⟩	6	0	0		77
109		2	0	5	0	0	-11.7	0	0	0	⟨3⟩	4	0	0		78.1
110												6				78.2
111												8				79
112		2	0	5	0	0	-11.7	0	⟨5⟩	0	0	6	0	0		81.1
113												15				81.2
114												60				81.3
115		2	0	5	0	0	-11.7	0	0	⟨4⟩	0	6	0	0		82.1
116												15				82.2
117												60				82.3

```
  1     7      13      19      25      31      37      43      49      55      61      67    75 76
  |llllllllllllllllllllllllllllllllllllllllllllllllllllllllllllllllllllllllll IDVAR(1)  IDVAR(2) NDV
                                      COEFFICIENTS
  α OR β
  SCHEDULES
```

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TEST RUN NUMBERS

NASA-MSFC-MAF

TABLE II (Continued)

TEST: CA26		DATA SET/RUN NUMBER COLLATION SUMMARY													DATE: POST TEST	
DATA SET IDENTIFIER	CONFIGURATION	CARRIER				ORBITER									MACH NUMBERS	
		α	β	δ_a	δ_r	δ_e	δ_{BF}	δ_a	ΔX	ΔY	ΔZ	i_o	β_o	ϕ_o	0.6	
R/AFE 118	747/1 ATY Φ6S1	2	0	-1	0	0	-11.7	0	C	C	△3	6	0	0	83	
119		2	0	5	10	0	-11.7	0	0	0	△3	6	0	0	84	
120		2	-5	5	0	0	-11.7	0	U	0	△3	6	-5	0	85	
121		4	0	5	0	0	-11.7	0	0	0	△3	4	0	0	86.1	
122												6			86.2	
123												8			87	
124		0	0	5	0	0	-11.7	0	0	0	△3	4	0	0	88.1	
125												6			88.2	
126												8			89	
127		2	0	5	0	0	-11.7	0	0	0	△3	6	0	7.5	90	
128	747/1 ATY Φ2S1	2	0	5	0	5	0	0	0	0	△3	6	0	7.5	91	
129		2	0	5	0	5	0	0	0	0	△3	6	5	7.5	92	
130		2	0	5	0	5	0	0	0	0	△3	6	0	7.5	93	
AFE 131	Φ2S1					5	0	0				△2	5	0	94.1	
132						5	0	0				△2	0	0	94.2	
133						5	0	0				△2	-5	0	94.3	
134						0	0	0				△2	0	0	13*	

TEST RUN NUMBERS

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1	7	13	19	25	31	37	43	49	55	61	67	75 76

COEFFICIENTS

α OR β SCHEDULES

IDVAR(1)   IDVAR(2)   NDV

* Vertical strut blade/orbiter gap sealed

NASA-MSFC-MAF

TABLE II (Continued)

DATA SET 1st CHARACTER IDENTIFIER	DATA SET NUMBER	INDEPENDENT VARIABLE FIRST	SECOND	DEPENDENT VARIABLES
AW	1-6	MACH	ALPHAO	BETAO, CN, CLM, CA, CY, CYN, CBL, CL, CD
AW	7	MACH	DZ	DY, DX, CN, CLM, CA, CY, CYN, CBL, CL, CD
AW	8-13	MACH	ALPHAO	BETAO, CN, CLM, CA, CY, CYN, CBL, CL, CD
AW	14-15	MACH	INCID	CN, CLM, CA, CY, CYN, CBL, CL, CD
AWRY	30-52	MACH	DZ	DY, DX, CN, CLM, CA, CY, CYN, CBL, CL, CD
AWRY	53-61	MACH	DY	DX, DZ, CN, CLM, CA, CY, CYN, CBL, CL, CD
AWRY	62-67	MACH	DX	DY, DZ, CN, CLM, CA, CY, CYN, CBL, CL, CD
AWRY	68-82	MACH	DZ	DY, DX, CN, CLM, CA, CY, CYN, CBL, CL, CD
AWRY	83-85	MACH	DX	DY, DZ, CN, CLM, CA, CY, CYN, CBL, CL, CD
AWRY	86-88	MACH	DY	DX, DZ, CN, CLM, CA, CY, CYN, CBL, CL, CD
AWRY	89-111	MACH	DZ	DY, DX, CN, CLM, CA, CY, CYN, CBL, CL, CD
AWRY	112-114	MACH	DX	DY, DZ, CN, CLM, CA, CY, CYN, CBL, CL, CD
AWRY	115-117	MACH	DY	DX, DZ, CN, CLM, CA, CY, CYN, CBL. CL, CD
AWRY	118-130	MACH	DZ	DY, DX, CN, CLM, CA, CY, CYN, CBL, CL, CD
AW	131-133	MACH	INCID	CN, CLM, CA, CY, CYN, CBL, CL, CD
AW	134	MACH	ALPHAO	BETAO, CN, CLM, CA, CY, CYN, CBL, CL, CD
BX	1-4	MACH	ALPHAO	CPCO, CPB1, CPB2, CPB3
BX	5-6	MACH	ALPHAO	CPCO, CPB1, CPB2, CPB3, CPS1, CPS2
BX	7	MACH	DZ	CPCO, CPB1, CPB2, CPB3, CPS1, CPS2, ALPHAO, BETAO
BX	8-11	MACH	ALPHAO	CPCO, CPB1, CPB2, CPB3, CPS1, CPS2
BX	12-13	MACH	ALPHAO	CPCO, CPS1, CPS2
BX	14-15	MACH	INCID	CPCO, CPS1, CPS2
BX	30-52	MACH	DZ	CPCO, CPB1, CPB2, CPB3, CPS1, CPS2, ALPHAO, BETAO, INCID, ALPHAC
BX	53-61	MACH	DY	CPCO, CPB1 CPB2, CPB3, CPS1, CPS2, ALPHAO, BETAO, INCID, ALPHAC
BX	62-67	MACH	DX	CPCO, CPB1, CPB2, CPB3, CPS1, CPS2, ALPHAO, BETAO INCID, ALPHAC

TABLE II (Continued)

DATA SET 1st CHARACTER IDENTIFIER	DATA SET NUMBER	INDEPENDENT VARIABLE FIRST	SECOND	DEPENDENT VARIABLES
BX	68-82	MACH	DZ	CPCO, CPB1, CPB2, CPB3, CPS1, CPS2, ALPHAO, BETAO, INCID, ALPHAC
BX	83-85	MACH	DX	CPCO, CPB1, CPB2, CPB3, CPS1, CPS2, ALPHAO, BETAO, INCID, ALPHAC
BX	86-88	MACH	DY	CPCO, CPB1, CPB2, CPB3, CPS1, CPS2, ALPHAO, BETAO, INCID, ALPHAC
BX	89-111	MACH	DZ	CPCO, CPB1, CPB2, CPB3, CPS1, CPS2, ALPHAO, BETAO, INCID, ALPHAC
BX	112-114	MACH	DX	CPCO, CPS1, CPS2, ALPHAO, BETAO, INCID, ALPHAC
BX	115-117	MACH	DY	CPCO, CPS1, CPS2, ALPHAO, BETAO, INCID, ALPHAC
BX	118-130	MACH	DZ	CPCO, CPS1, CPS2, ALPHAO, BETAO, INCID, ALPHAC
BX	131-133	MACH	INCID	CPCO, CPS1, CPS2
BX	134	MACH	ALPHAO	CPCO, CPB1, CPB2, CPB3, CPS1, CPS2
RY	16-23	MACH	ALPHAC	BETAC, CN, CLM, CA, CY, CYN, CBL, CL, CD
RY	24	MACH	DZ	DY, DX. CN, CLM, CA, CY, CYN, CBL, CL, CD
RY	25	MACH	DX	DY, DZ, CN, CLM, CA, CY, CYN, CBL, CL, CD
RY	26-29	MACH	ALPHAC	BETAC, CN, CLM, CA, CY, CYN, CBL, CL, CD
SZ	16-23	MACH	ALPHAC	CPCC, CPSB1, CPSB2, CPSB3, Q(PSF)
SZ	24	MACH	DZ	CPCC, CPSB1, CPSB2, CPSB3, Q(PSF), ALPHAC, BETAC
SZ	25	MACH	DX	CPCC, CPSB1, CPSB2, CPSB3, Q(PSF), ALPHAC, BETAC
SZ	26-29	MACH	ALPHAC	CPCC, CPSB1, CPSB2, CPSB3, Q(PSF)
SZ	30-52	MACH	DZ	CPCC, CPSB1, CPSB2, CPSB3, Q(PSF), ALPHAC, BETAC, ALPHAO, BETAO, INCID
SZ	53-61	MACH	DY	CPCC, CPSB1, CPSB2, CPSB3, Q(PSF), ALPHAC, BETAC, ALPHAO, BETAO, INCID
SZ	62-67	MACH	DX	CPCC, CPSB1, CPSB2, CPSB3, Q(PSF), ALPHAC, BETAC, ALPHAO, BETAO, INCID

TABLE II (Concluded)

DATA SET 1st CHARACTER IDENTIFIER	DATA SET NUMBER	INDEPENDENT VARIABLE		DEPENDENT VARIABLES
		FIRST	SECOND	
SZ	68-82	MACH	DZ	CPCC, CPSB1, CPSB2, CPSB3, Q(PSF), ALPHAC, BETAC, ALPHAO, BETAO, INCID
SZ	83-85	MACH	DX	CPCC, CPSB1, CPSB2, CPSB3, Q(PSF), ALPHAC, BETAC, ALPHAO, BETAO, INCID
SZ	86-88	MACH	DY	CPCC, CPSB1, CPSB2, CPSB3, Q(PSF), ALPHAC, BETAC, ALPHAO, BETAO, INCID
SZ	89-111	MACH	DZ	CPCC, CPSB1, CPSB2, CPSB3, Q(PSF), ALPHAC, BETAC, ALPHAO, BETAO, INCID
SZ	112-114	MACH	DX	CPCC, CPSB1, CPSB2, CPSB3, Q(PSF), ALPHAC, BETAC, ALPHAO, BETAO, INCID
SZ	115-117	MACH	DY	CPCC, CPSB1, CPSB2, CPSB3, Q(PSF), ALPHAC, BETAC, ALPHAO, BETAO, INCID
SZ	118-130	MACH	DZ	CPCC, CPSB1, CPSB2, CPSB3, Q(PSF), ALPHAC, BETAC, ALPHAO, BETAO, INCID

TABLE III (MODEL DIMENSIONAL DATA)

a. Orbiter Model

MODEL COMPONENT : ___BODY - CML - B$_{64}$___

GENERAL DESCRIPTION : ___The body is an elongated structure containing___
the Crew Module and Cargo Bay. Same as IML plus 1" TPS.

MODEL SCALE: 0.0125

DRAWING NUMBER : ___VC70-000002, SS-A01377___

DIMENSIONS :

	FULL SCALE	MODEL SCALE
Length (X_0 = 235 to 1519), In.	1284.0	16.050
Max Width (X_0 = 1516.8), In.	262.718	3.284
Max Depth (X_0 = 1463.316), In.	248.575	3.107
Fineness Ratio	5.1365	5.1365
Area - Ft^2		
Max. Cross-Sectional	340.82	0.053
Planform		
Wetted		
Base		

TABLE III (Cont'd)

a. Orbiter Model

MODEL COMPONENT : ___CANOPY (OUTER MOLD LINE) - C_{14}_____

GENERAL DESCRIPTION : _The canopy is that part of the forward fuselage_

which covers the Crew Module. One inch TPS thickness on the canopy.

Configuration 140C._____

 MODEL SCALE: 0.0125_____

DRAWING NUMBER : ___VC70-000002, SS-A01377_____

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X_0=435.196 - 670.0), In.	234.80	2.935
Max Width (X_0 = 594.0), In.	195.58	2.445
Max Depth		
Fineness Ratio		
Area		
Max. Cross—Sectional		
Planform		
Wetted		
Base		

WINDSHIELD PLANES:
$$.7012\ X_0 - .2552\ Y_0 - .6656\ Z_0 - 6.1789 = 0$$
$$.5710\ X_0 - .5641\ Y_0 - .5965\ Z_0 + 32.7354 = 0$$
$$.2636\ X_0 - .7564\ Y_0 - .5965\ Z_0 + 189.4099 = 0$$

TABLE III (Cont'd)

a. Orbiter Model

MODEL COMPONENT : __ELEVON - E$_{44}$__

GENERAL DESCRIPTION : __6.0 In. F.S. gaps machined into E$_{26}$ elevon.__

__Flipper doors, centerbody pieces, and tipseals are not simulated.__ (Data

are for one side.)

MODEL SCALE: 0.0125

DRAWING NUMBER : __Not available.__

DIMENSIONS :	FULL SCALE	MODEL SCALE
Area – Ft^2	210.00	0.033
Span (equivalent), In.,	349.2	4.365
Inb'd equivalent chord , In.	118.0	1.475
Outb'd equivalent chord , In.	55.19	0.690
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.2096	0.2096
At Outb'd equiv. chord	0.4004	0.4004
Sweep Back Angles, degrees		
Leading Edge	0.00	0.00
Trailing Edge	– 10.056	– 10.056
Hingeline	0.00	0.00
Area Moment (Nxxxxxxxxxxxx),Ft^3 (Product of area & $\bar{c}$)	1587.25	0.003
Mean Aerodynamic Chord, In.	90.7	1.134

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TABLE III (Cont'd)

a. Orbiter Model

MODEL COMPONENT: _____ BODY FLAP - F$_{14}$ _____

GENERAL DESCRIPTION: The body flap is a secondary movable airfoil

located at the aft end of the body.

MODEL SCALE: 0.0125

DRAWING NUMBER: VC70-000002

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area – Ft^2	135.75	0.021
Span (equivalent), In.	241.33	3.017
Inb'd equivalent chord, In.	81.0	1.013
Outb'd equivalent chord, In.	81.0	1.013
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.0	0.0
At Outb'd equiv. chord	0.0	0.0
Sweep Back Angles, degrees		
Leading Edge	0.0	0.0
Tailing Edge	0.0	0.0
Hingeline	0.0	0.0
Area Moment (Normal to hinge line) (Product of Area & $\bar{c}$), Ft^3	916.31	0.0018
Mean Aerodynamic Chord, In.	81.0	1.013

TABLE III (Cont'd)

a. Orbiter Model

MODEL COMPONENT : _____ OMS PODS (OML) — M_{18} _____

GENERAL DESCRIPTION : The OMS pods are nacelles housing the maneuvering

engines and are located on the fuselage on either side of the vertical

tail. Same as IML plus 1/2" TPS.

MODEL SCALE: 0.0125

DRAWING NUMBER : VC70-000002, VL70-843001

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X_0=1311 - 1511), In.	200.00	2.500
Max Width (X_0 = 304), In.	135.75	1.697
Max Depth (X_0 = 304), In.	74.5	0.931
Fineness Ratio		
Area — Ft^2		
Max. Cross-Sectional	58.169	0.009
Planform		
Wetted		
Base		

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TABLE III (Cont'd)

a. Orbiter Model

MODEL COMPONENT: NOZZLES - N_{92}

GENERAL DESCRIPTION: The two orbiter maneuvering system nozzles are lavel-bell shaped and are located at the aft end of the OMS pods. These dimensions are external and are not to be used for plume tests.

MODEL SCALE: 0.0125

DRAWING NUMBER: MC62100009, VC70-000002, VL70-008401, Aerojet 1181900

DIMENSIONS:	FULL SCALE	MODEL SCALE
MACH NO.		
Length - In.		
Gimbal Point to Exit Plane	56.00	0.700
Throat to Exit Plane	56.00	0.700
Diameter - In.		
Exit	45.09	0.564
Throat		
Inlet		
Area - ft^2		
Exit	11.09	0.139
Throat		
Gimbal Point (Station) - In.		
X	1518.0	18.975
Y	88.0	1.100
Z	492.0	6.150
Null Position - Deg.		
Pitch	15.82°	15.82°
Yaw	6.5°	6.5°

TABLE III (Cont'd)

a. Orbiter Model

MODEL COMPONENT: MPS NOZZLES - N_{94}

GENERAL DESCRIPTION: ___The main propulsion nozzles are Laval-bell shaped___

___and are located on the aft planes of the orbiter. These dimensions are ex-___

___ternal and are not to be scaled for plume tests.___

MODEL SCALE: ___0.0125___

DRAWING NUMBER: ___VC70-000002, VL70-008144; RS009169, RS009107, 13M15000___

DIMENSIONS:	FULL SCALE	MODEL SCALE
MACH NO.		
Length - In.		
Gimbal Point to Exit Plane	157.00	1.963
Throat to Exit Plane		
Diameter - In.		
Exit	97.914	1.224
Throat		
Inlet		
Area - ft^2		
Exit	52.290	0.008
Throat		
Gimbal Point (Station) - In.		
Upper Nozzle		
X_0	1445.0	18.063
Y_0	0.0	0.0
Z_0	443.0	5.538
Lower Nozzles		
X_0	1468.170	18.352
Y_0	53.00	0.663
Z_0	342.640	4.283
Null Position - Deg.		
Upper Nozzle		
Pitch	16.0	16.0
Yaw	0.0	0.0
Lower Nozzle		
Pitch	10.0	10.0
Yaw	3.5	3.5

TABLE III (Cont'd)

a. Orbiter Model

MODEL COMPONENT: MPS NOZZLES - N_{105}

GENERAL DESCRIPTION: Same as N_{94} except the upper nozzle is removed.

MODEL SCALE: 0.0125

DRAWING NUMBER: VC70-000002, VL70-008144; RS009169, RS009107, 13M15000

DIMENSIONS:	FULL SCALE	MODEL SCALE
MACH NO.		
Length - In.		
Gimbal Point to Exit Plane	157.00	1.963
Throat to Exit Plane		
Diameter - In.		
Exit	97.914	1.224
Throat		
Inlet		
Area - ft^2		
Exit	52.290	0.008
Throat		
Gimbal Point (Station) - In.		
Upper Nozzle		
X		
Y		
Z		
Lower Nozzles		
X_0	1468.170	18.352
Y_0	53.00	0.663
Z_0	342.640	4.283
Null Position - Deg.		
Upper Nozzle		
Pitch		
Yaw		
Lower Nozzle		
Pitch	10.0	10.0
Yaw	3.5	3.5

TABLE III (Cont'd)

a. Orbiter model

MODEL COMPONENT : _____ RUDDER - R$_{18}$ _____

GENERAL DESCRIPTION _____ The rudder is a secondary movable airfoil at the

trailing edge of the vertical fin that imparts yaw forces. This dimensional

data was calculated from the OML master dimensions 7-19-74. _____

MODEL SCALE: 0.0125 _____

DRAWING NUMBER _____

DIMENSIONS	FULL SCALE	MODEL SCALE
Area = Ft^2	97.148	0.015
Span (equivalent) , In.	198.614	2.483
Inb'd equivalent chord, In.	90.07	1.126
Outb'd equivalent chord , In.	50.80	0.635
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.400	0.400
At Outb'd equiv. chord	0.400	0.400
Sweep Back Angles, degrees		
Leading Edge	34.833	34.833
Trailing Edge	26.249	26.249
Hingeline	34.833	34.833
Area Moment (MAC X AREA, Ft^3)	584.99	0.0011
Mean Aerodynamic Chord, In.	72.260	0.903

TABLE III (Cont'd)

a. Orbiter Model

MODEL COMPONENT : ___ ORBITER TAILCONE - TC_4 _____

GENERAL DESCRIPTION : _Fairing mounted on orbiter fuselage base for_

ferry missions configuration. _____

_____

MODEL SCALE: 0.0125 _____

DRAWING NUMBER : ___SS-A01452 _____

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length	435.76	5.447
Max Width	300.80	3.76
Max Depth Height	266.40	3.33
Fineness Ratio		
Area $- Ft^2$		
Max. Cross—Sectional	462.37	0.0722
Planform	635.803	0.0993
Wetted		
Base		

TABLE III (Cont'd)

a. Orbiter Model

MODEL COMPONENT: VERTICAL - V_{23} (Outer Mold Lines)

GENERAL DESCRIPTION: The vertical tail is double-wedge shaped and mounted dorsally on the aft fuselage. These data correspond to configuration 140C.

MODEL SCALE: 0.0125

DRAWING NUMBER: VC70-000002, master dimensions.

DIMENSIONS:	FULL SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo) - Ft^2		
Planform	413.253	0.065
Span (Theo) - In.	315.72	3.947
Aspect Ratio	1.675	1.675
Rate of Taper	0.507	0.507
Taper Ratio	0.404	0.404
Sweep-Back Angles, Degrees.		
Leading Edge	45.000	45.000
Trailing Edge	26.25	26.25
0.25 Element Line	41.13	41.13
Chords:		
Root (Theo) WP	268.50	3.356
Tip (Theo) WP	108.47	1.356
MAC	199.81	2.498
Fus. Sta. of .25 MAC	1463.50	18.294
W.P. of .25 MAC	635.52	7.944
B.L. of .25 MAC	0.0	0.0
Airfoil Section		
Leading Wedge Angle - Deg.	10.00	10.00
Trailing Wedge Angle - Deg.	14.92	14.92
Leading Edge Radius	2.00	0.0250
Void Area	13.17	0.0002
Blanketed Area	0.0	0.0

TABLE III (Cont'd)
a. Orbiter Model

MODEL COMPONENT: WING-W_116

GENERAL DESCRIPTION:

NOTE: Identical to W_114 except airfoil thickness. Dihedral angle is along

trailing edge of wing. Geometric twist = 0.

MODEL SCALE: 0.0125

TEST NO.   DWG. NO. VL70-000140A, -000200

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo.) Ft^2		
Planform	2690.00	0.420
Span (Theo In.	936.68	11.709
Aspect Ratio	2.265	2.265
Rate of Taper	1.177	1.177
Taper Ratio	0.200	0.200
Dihedral Angle, degrees	3.500	3.500
Incidence Angle, degrees	0.500	0.500
Aerodynamic Twist, degrees		
Sweep Back Angles, degrees		
Leading Edge	45.00	45.00
Trailing Edge	- 10.056	- 10.056
0.25 Element Line	35.209	35.209
Chords:		
Root (Theo) B.P.O.O.	689.24	8.616
Tip, (Theo) B.P.	137.85	1.723
MAC	474.81	5.935
Fus. Sta. of .25 MAC	1136.83	14.210
W.P. of .25 MAC	290.58	3.632
B.L. of .25 MAC	182.13	2.277
EXPOSED DATA		
Area (Theo) Ft^2	1751.50	0.274
Span, (Theo) In. BP108	720.68	9.009
Aspect Ratio	2.059	2.059
Taper Ratio	0.245	0.245
Chords		
Root BP108	562.09	7.026
Tip 1.00 $\frac{b}{2}$	137.85	1.723
MAC	392.83	4.910
Fus. Sta. of .25 MAC	1185.98	14.825
W.P. of .25 MAC	294.30	3.679
B.L. of .25 MAC	251.77	3.147
Airfoil Section (Rockwell Mod NASA)		
XXXX-64		
Root $\frac{b}{2}$ =	0.113	0.113
Tip $\frac{b}{2}$ =	0.120	0.120
Data for (1) of (2) Sides		
Leading Edge Cuff		
Planform Area Ft^2	113.16	0.0177
Leading Edge Intersects Fus M. L. @ Sta	500.0	6.250
Leading Edge Intersects Wing @ Sta	1024.0	12.800

TABLE III (MODEL DIMENSIONAL DATA)

a. Orbiter Model (Concluded)

MODEL COMPONENT : <u>Mounting Strut - S_1</u>

GENERAL DESCRIPTION : <u>Blade strut attachment to orbiter aft upper</u>

<u>fuselage where vertical tail is normally mounted. Strut leading edge</u>

<u>and lower trailing edge conform to the vertical tail planform. Airfoil</u>

<u>section is blunted diamond. The tip of the strut mounts to a sting.</u>

MODEL SCALE: <u>0.0125</u>
DRAWING NUMBER : <u>Rockwell W-11335H</u>

DIMENSIONS :	MODEL SCALE
Theoretical intersection of L.E. with fuselage ML, in.	
X_0	15.973
Z_0	6.250
Leading edge sweep angle, deg.	45.0
Trailing edge sweep angle, deg.	45.0
chord length, in.	2.38
maximum thickness, in.	0.52
distance from L.E. to maximum thickness, in.	1.42
position of sting C_L, in. Z_0	12.835

TABLE III (MODEL DIMENSIONAL DATA)

b. Carrier Model

MODEL COMPONENT: ATTACH STRUCTURE – AT_{96}

GENERAL DESCRIPTION: Forward attach structure between the Orbiter and Carrier, faired struts, $i_0 = 4°$

MODEL SCALE: 0.0125

DRAWING NO.: Boeing Dwg. 747-MD-654, SS-A01559-4, -18, -35

DIMENSIONS:

		FULL SCALE	MODEL SCALE
i_0, Incidence angle, deg. (Orbiter FRL to 747 FRL)		4.0	4.0
Fairing chord, right and left, In.		31.0	0.388
Fairing T/C		0.226	0.226
Carrier attach points, In.	BSTA	689.4	8.617
	BWL	372.0	4.650
	BL	66.3	0.829
Orbiter attach points, In.	X_0	388.15	4.852
	Z_0	283.11	3.539
	Y_0	0.0	0.0
	BSTA	681.52	8.519
	BWL	480.4	6.005

TABLE III (Cont'd)

b. Carrier Model

MODEL COMPONENT: ATTACH STRUCTURE - AT_{99}

GENERAL DESCRIPTION: Aft attach structure between orbiter and carrier, same as AT_{95} with a single fairing covering the main strut and drag strut on each side, and a fairing on the sway brace.

MODEL SCALE: 0.0125

DRAWING NO.: Boeing Dwg 747-MD-658, W-1135A-11, -12, SS-A01559-33, -34, -35

DIMENSIONS:		FULL SCALE	MODEL SCALE
Orbiter attach points, In.	X_0	1317.0	16.462
	Y_0	± 96.51	± 1.206
	Z_0, BL	267.5	3.344
	BSTA	1607.0	20.087
	BWL	400.0	5.000
Main fairing:			
Root chord, In.		250.0	3.125
T/c of root chord		0.09	0.09
Tip chord, In.		120.0	1.500
T/c of tip chord		0.14	0.14
Sway brace:			
Chord, In.		31.0	0.388
T/c		0.226	0.226

TABLE III (Cont'd)

b. **Carrier Model**

MODEL COMPONENT: ATTACH STRUCTURE - AT_{112}

GENERAL DESCRIPTION: Forward attach structure between the Orbiter and Carrier with truncated strut fairings. The Orbiter/strut attach point is covered with a "bathtub" fairing, and the 747/strut attach points are also faired over. Struts are set in the $i_o = 4^o$ position.

MODEL SCALE: 0.0125

DRAWING NO.: Boeing Dwgs. 747-MD-680 (Modified), AX _319-224

DIMENSIONS:		FULL SCALE	MODEL SCALE
i_o, Incidence angle, deg. (Orbiter FRL to 747 FRL)		4.0	4.0
Strut Fairing			
Chord, In.		18.667	0.233
t/c		0.480	0.480
Length, (Each side), In.		112.0	1.400
Orbiter/Strut "Bathtub" Fairing			
Chord, In.		87.20	1.09
t/c		0.275	0.275
Carrier Attach Points, In.			
	BSTA	680.0	8.500
	BWL	372.0	4.650
	BL	±66.3	±0.829
Orbiter Attach Point, In.			
	X_o	388.15	4.852
	Z_o	283.11	3.539
	Y_o	0.0	0.0
	BSTA	680.0	8.500
	BWL	480.4	6.005

TABLE III (Cont'd)
b. Carrier Model

MODEL COMPONENT: ATTACH STRUCTURE - AT_{113}

GENERAL DESCRIPTION: Aft attach structure between Orbiter and Carrier, all components except the drag struts are faired. Consists of two faired vertical members, two sway braces, and two drag struts. There are fairing blisters at each end of the sway braces and on the forward end of the drag struts.

MODEL SCALE: 0.0125

DRAWING NO.: Boeing Dwgs. 747-MD-683, AX 1319-213

DIMENSIONS:		FULL SCALE	MODEL SCALE
Orbiter Attach Points, In.			
	X_o	1317.0	16.462
	Y_o	±96.51	±1.206
	Z_o	267.5	3.344
	BSTA	1607.0	20.087
	BWL	400.0	5.000
747 Attach Points, In.			
	BSTA	1607.0	20.087
	BWL	320.0	4.000
	BL	±96.51	±1.206
Main Strut Fairings			
Root chord (BWL 320-358.8), In.		80.0	
t/c, Root chord		0.183	0.183
Tip chord, Theoretical (BWL 398), In.		137.0	1.713
t/c, Tip chord, Theoretical		0.250	0.250
Sway Brace Fairings			
Chord, In.		40.28	0.504
t/c		0.180	0.180
Length (Each side), In.		56.0	0.700
Drag Struts			
Fwd attach points	BSTA, in.	1443	18.038
	BWL, in.	320	4.000
	BL, in.	±96.51	±1.206
Diameter, In.		12.0	0.150

TABLE III (Cont'd)

MODEL COMPONENT : BODY - B_27,8   b. Carrier Model

GENERAL DESCRIPTION : Body 74-7 Project with A.P.V.

MODEL SCALE: 0.0125   MODEL DWG: 13181-1

DRAWING NUMBER: 65C13609, 1318-54

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length , In.	2702.0	33.78
Max Width , In.	255.3	3.19
Max Depth		
Fineness Ratio	9.73	9.73
Area – Ft^2		
Max. Cross-Sectional		
Planform		
Wetted	14.093	2.20
Base		

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TABLE III (Cont'd)

b. Carrier Model

MODEL COMPONENT: HORIZONTAL TAIL - $H_{15.6}$

GENERAL DESCRIPTION: Horizontal tail, H_{15}, with vertical fins on each

tip at body B.L. 427.3

MODEL SCALE: 0.0125   MODEL DWG: 1318I-1

DRAWING NO.: 65C13609, 1318-5, 1318-70

	FULL SCALE	MODEL SCALE
DIMENSIONS:		
Fin Exposed Data (one side):		
Area = Ft^2	200.0	0.0312
Span, In.	252.0	3.15
Chord, In.	113.6	1.42

TABLE III (Cont'd)

b. Carrier Model

MODEL COMPONENT: M$_{25}$

GENERAL DESCRIPTION: Inboard 747, JT9D nacelle strut

MODEL SCALE: 0.0125   MODEL DWG: 1318I-1

DRAWING NO.: 65C13609, 1318-60

DIMENSIONS:	FULL SCALE	MODEL SCALE
Wing B.L. of nacelle C_L, In.	470.0	5.875
Cant angle deg., inboard	2.0	2.0

TABLE III (Cont'd)

b. Carrier Model

MODEL COMPONENT: M_{26}

GENERAL DESCRIPTION: Outboard 747, JT9D
Strut

MODEL SCALE: 0.0125   MODEL DWG: 1318I-1

DRAWING NO.: 65C13609, 1318-60

DIMENSIONS:	FULL SCALE	MODEL SCALE
W L of C_L, In.	834.0	10.425
Cant angle, deg. inboard	2.0	2.0

TABLE III (Cont'd).

b. Carrier Model

MODEL COMPONENT: N_{57}

GENERAL DESCRIPTION: Inboard fan cowl and primary 747 nacelle, flow-
through type.

MODEL SCALE: 0.0125   MODEL DWG: 1318I-1

DRAWING NO.: 65C13609, 1318-60

TABLE III (Cont'd)

b. Carrier Model

MODEL COMPONENT: N_{58}

MODEL DESCRIPTION: Outboard fan cowl and primary 747 nacelle, flow-through type.

MODEL SCALE: 0.0125   MODEL DWG: 1318I-1

DRAWING NO.: 65C13609, 1318-60

TABLE III (Cont'd)

b. Carrier Model

MODEL COMPONENT: SPOILERS - S_{1-12}

GENERAL DESCRIPTION: Multi-panel flight spoilers. Four outboard and two inboard spoilers per side. Subscript denotes spoiler panel S_1 is the most outboard L.H. panel and S_{12} is most outboard R.H. panel.

MODEL SCALE: 0.0125   MODEL DWG: 13181-1

DRAWING NO.: 65C13609, 1318-56

DIMENSIONS: (ONE PANEL)	FULL SCALE	MODEL SCALE
Outboard S_{1-4} and S_{9-12} (Ft^2)	21.48	0.0034
Span (equivalent), In.	75.00	0.94
Chord, In.	41.28	0.52
Inboard, S_{5-6} and S_{7-8} (Ft^2)	35.31	0.0055
Span (equivalent), In.	90.00	1.130
Chord, In.	56.52	0.71

TABLE III (Cont'd)

b. Carrier Model

MODEL COMPONENT: T_{14}

GENERAL DESCRIPTION: Flap track fairings, four on each side

MODEL SCALE: 0.0125

DRAWING NO.: 65C13609, 1318-67

DIMENSIONS:

	FULL SCALE	MODEL SCALE
WBL of Track No. 1, In.	235.3	2.94
2, In.	353.0	4.41
3, In.	585.0	7.31
4, In.	743.6	9.30
Distance from wing		
Trailing edge to:		
Track trailing edge, In.	44.0	0.55

TABLE III (Cont'd)

b. Carrier Model

MODEL COMPONENT: VERTICAL -- $V_{9.1}$

GENERAL DESCRIPTION: Swept vertical tail

MODEL SCALE: 0.0125   MODEL DWG: 13181-1

DRAWING NO.: 65C13609, 1318-8

DIMENSIONS:	FULL SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo), Ft^2	630.0	0.098
Span (Theo), In.	386.5	4.830
Sweepback angles, deg., L.E.	50.12	50.12
Aspect ratio	1.25	1.25
Chord:		
Root (Theo), WP, In.	461.67	5.77
Tip (Theo), WP, In.	157.0	1.96
Mean Aerodynamic Chord, In.	334.16	0.43
Fus. Sta. of 0.25 MAC	2529.6	31.62
W.P. of 0.25 MAC	528.0	6.60

TABLE III (Concluded)

b. Carrier Model

MODEL COMPONENT: WING – $W_{44.1}$

GENERAL DESCRIPTION: Swept 747 wing

MODEL SCALE: 0.0125		MODEL DWG: 1318I-1
DRAWING NO.: 65C13609, 1318-46		

DIMENSIONS:	FULL SCALE	MODEL SCALE
Total Data:		
Area (Theo.), Ft^2		
Planform	5500.00	0.860
Span (Theo.), In.	2348.0	29.35
Aspect ratio	6.96	6.96
Incidence angle, deg.	7.0	7.0
Chords, In.:		
MAC	327.8	4.10
Fus. sta. of 0.25 MAC	1339.87	16.75
W.P. of 0.25 MAC	190.42	2.38

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TABLE IV.

CA-26 DATASET DESCRIPTION

Dataset Type		Description
RFEXXX	YFEXXX	Carrier main balance data.
SFEXXX	ZFEXXX	Due to the large amount of data, alternate points were placed in corresponding data-sets, e.g., R + S = total. Y and Z contain additional variables supplementary to R and S, respectively.
AFEXXX	WFEXXX	Orbiter balance data. Data were separated similar to the carrier data where W and X contain the supplementary variables.
BFEXXX	XFEXXX	
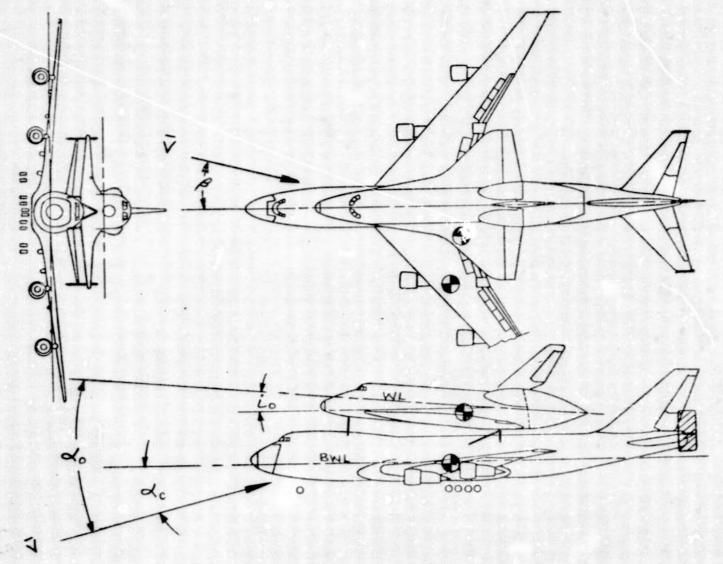
Notes:

1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrows

2. For clarity, origins of wind and stability axes have been displaced from the center of gravity

a. General
Figure 1. Axis systems.
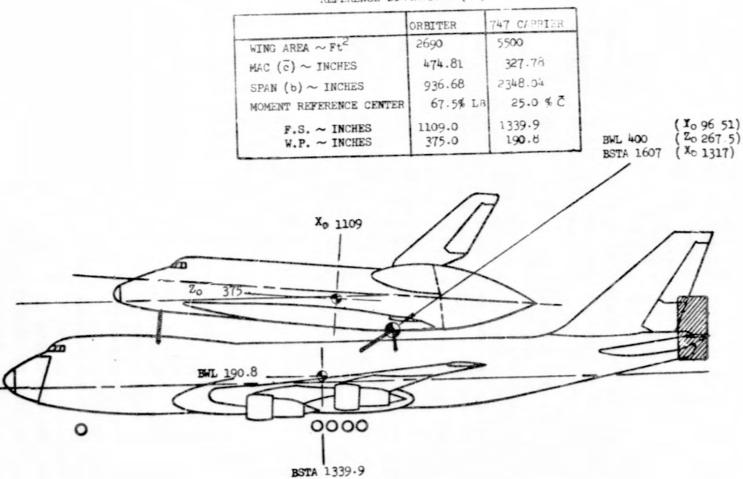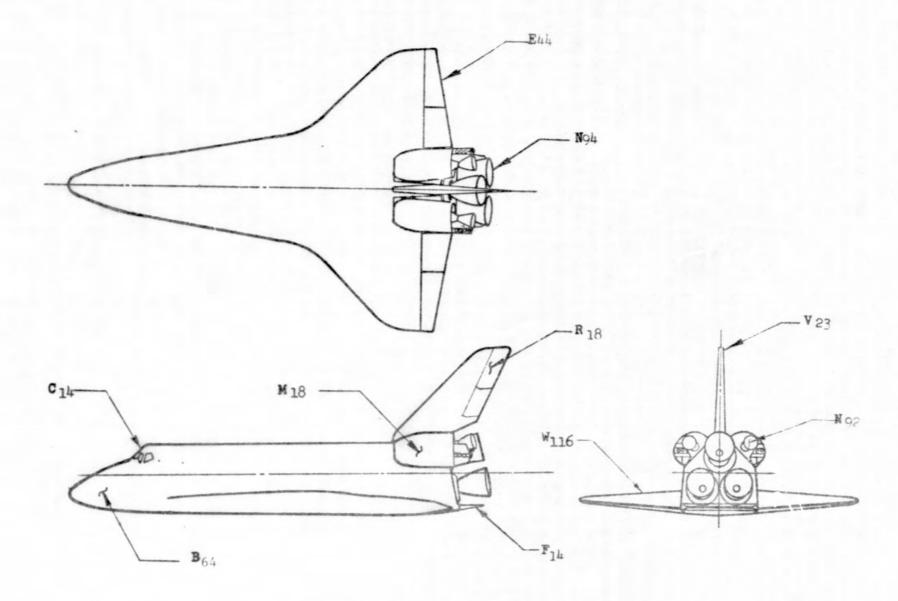
b. Orbiter/747 Angular Relations

Figure 1. Axis systems

REFERENCE DIMENSIONS (FS)

	ORBITER	747 CARRIER
WING AREA ~ Ft^2	2690	5500
MAC ($\bar{c}$) ~ INCHES	474.81	327.78
SPAN (b) ~ INCHES	936.68	2348.04
MOMENT REFERENCE CENTER	67.5% LB	25.0 % $\bar{c}$
F.S. ~ INCHES	1109.0	1339.9
W.P. ~ INCHES	375.0	190.8
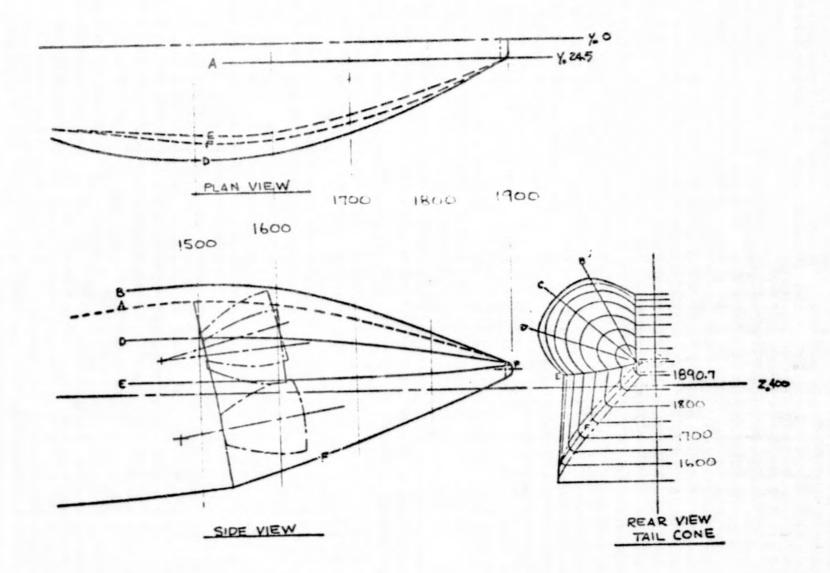
c. Orbiter/747 Flight Test Configuration Reference Dimensions

Figure 1. Axis systems
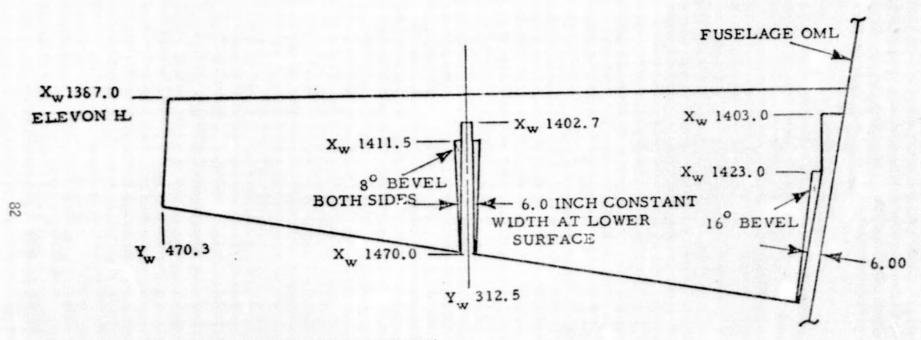
a. SSV Orbiter Configuration (VC70-000002)
Figure 2. Model Instrumentation Sketches

Y. 0
Y. 24.5
A

E
F
D

PLAN VIEW

1500   1600   1700   1800   1900

B
A
D
E
F

SIDE VIEW

B
C
D
E
F
1890.7   Z.400
1800
1700
1600

REAR VIEW
TAIL CONE

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b. Orbiter Tail Cone -- TC4 (X_{3B})

Figure 2. Model Instrumentation Sketches

E$_{44}$ elevon with 6.0 inch gaps installed. Flipper doors, centerbody pieces, and tip seals are not simulated.

X$_w$ 1367.0
ELEVON H.

X$_w$ 1402.7

X$_w$ 1411.5

8° BEVEL
BOTH SIDES

6.0 INCH CONSTANT
WIDTH AT LOWER
SURFACE

FUSELAGE OML

X$_w$ 1403.0

X$_w$ 1423.0

16° BEVEL

Y$_w$ 470.3

X$_w$ 1470.0

Y$_w$ 312.5

6.00
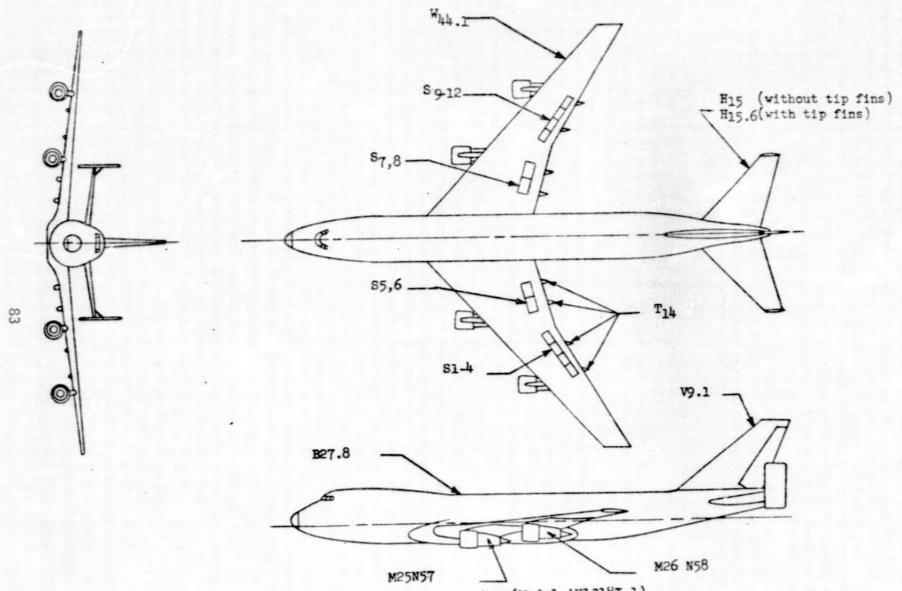
(ALL DIMENSIONS ARE FULL SCALE, INCHES)
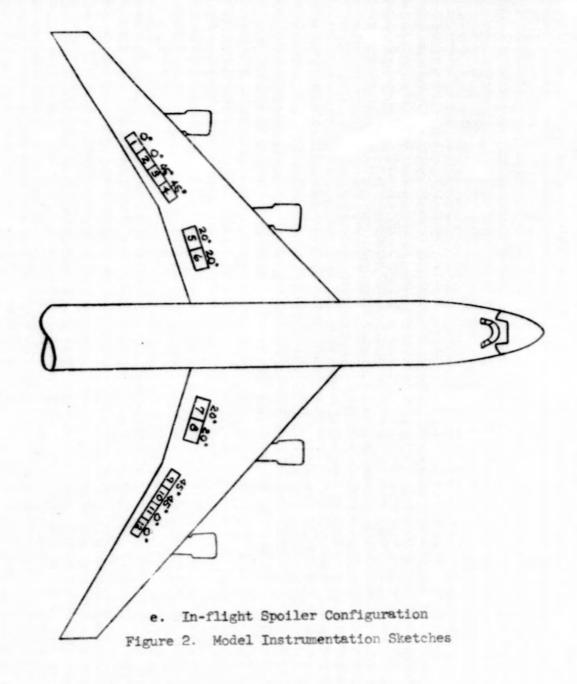
(VIEW IS PERPENDICULAR TO WING
REFERENCE PLANE)

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c. Elevon - E44

Figure 2. Model Instrumentation Sketches

W$_{44.1}$

S$_{9}$-12

H$_{15}$ (without tip fins)
H$_{15.6}$(with tip fins)

S$_{7,8}$

S5,6

T$_{14}$

S1-4

V9.1

B27.8

M25N57

M26 N58
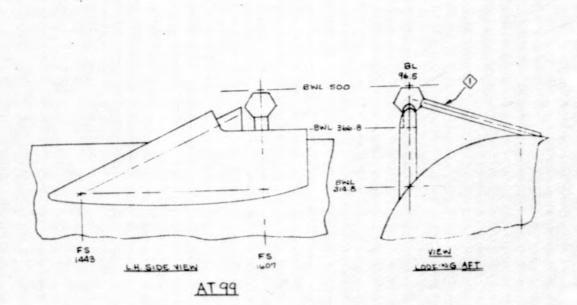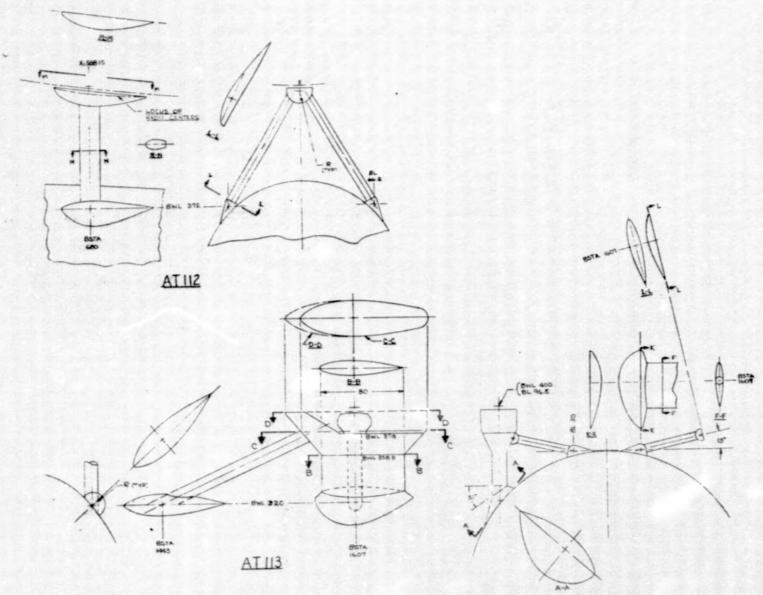
d. 747-100 Configuration (Model AX1318I-1)

Figure 2. Model Instrumentation Sketches

e. In-flight Spoiler Configuration

Figure 2. Model Instrumentation Sketches
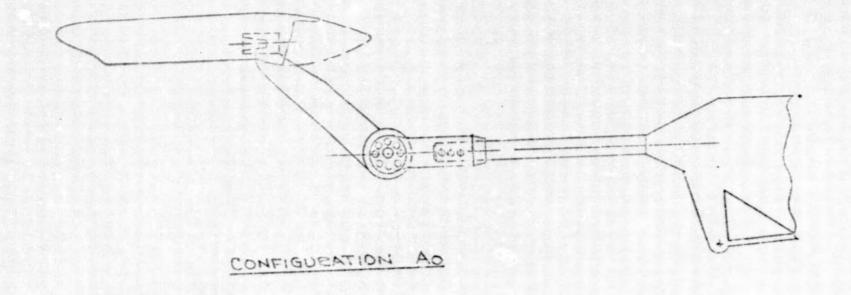
85
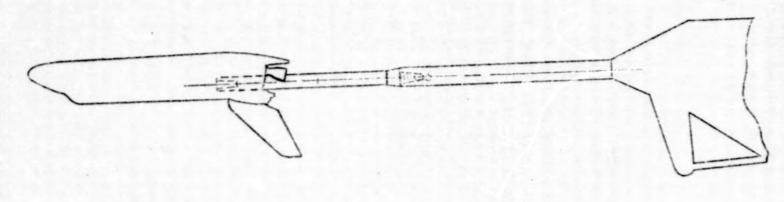
f. Simulated Attach Structure AT96 and AT99 (ATx)

Figure 2. Model Instrumentation Sketches

AT 112

AT 113

g. Simulated Attach Structure AT_{112} and AT_{113} (AT_y)

Figure 2. Model Instrumentation Sketches

CONFIGURATION Ao
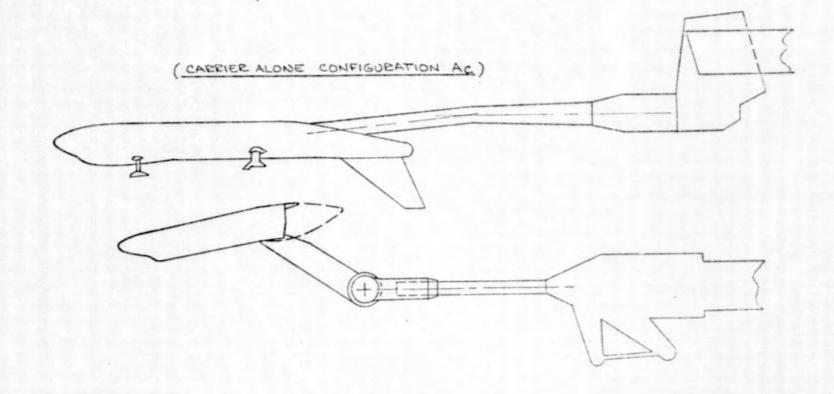
CONFIGURATION As
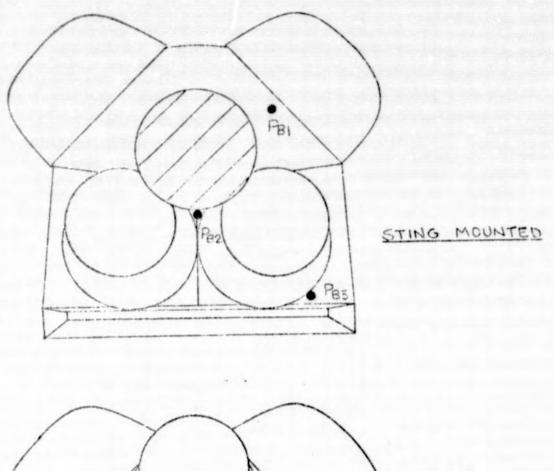
h. Orbiter Alone Installation Sketches

Figure 2. Model Instrumentation Sketches

(CARRIER ALONE CONFIGURATION Ac)

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CONFIGURATION A1
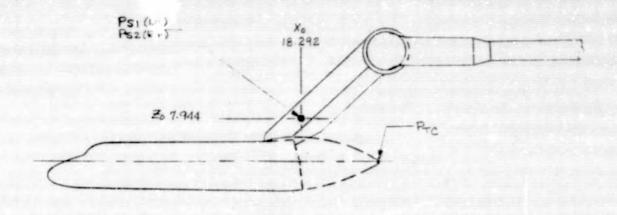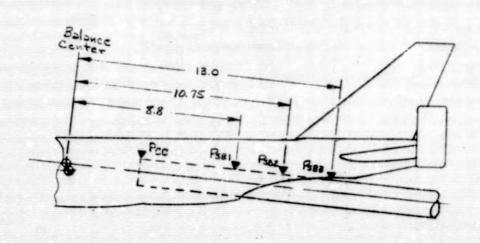
i. Carrier and Separation Installation Sketches

Figure 2. Model Instrumentation Sketches

STING MOUNTED

j. Orbiter Base Pressure Tap Locations

Figure 2. Model Instrumentation Sketches
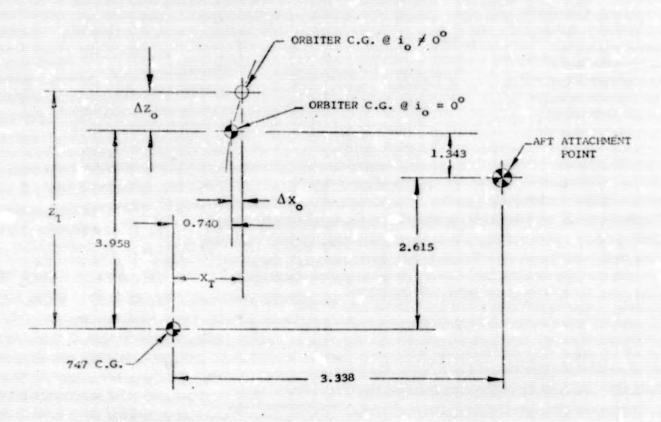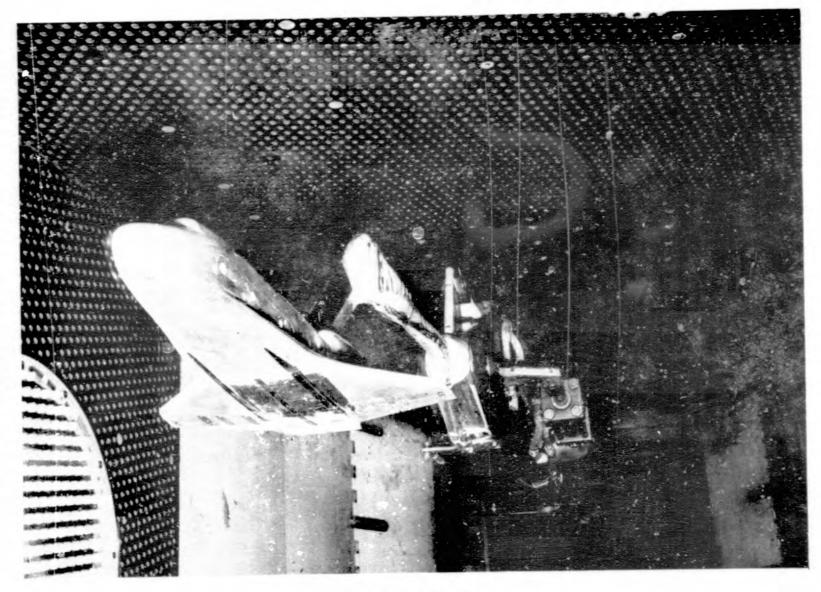
k. Sting and Strut Pressure Tap Locations

Figure 2. Model Instrumentation Sketches

$$\Delta x_o = 2.925 \cos (i_o + 27.336)$$
$$\Delta z_o = 2.925 \sin (i_o + 27.336) - 1.343$$

$$x_{TRANSFER} = 0.740 + \Delta x_o$$
$$z_{TRANSFER} = 3.958 + \Delta z_o$$
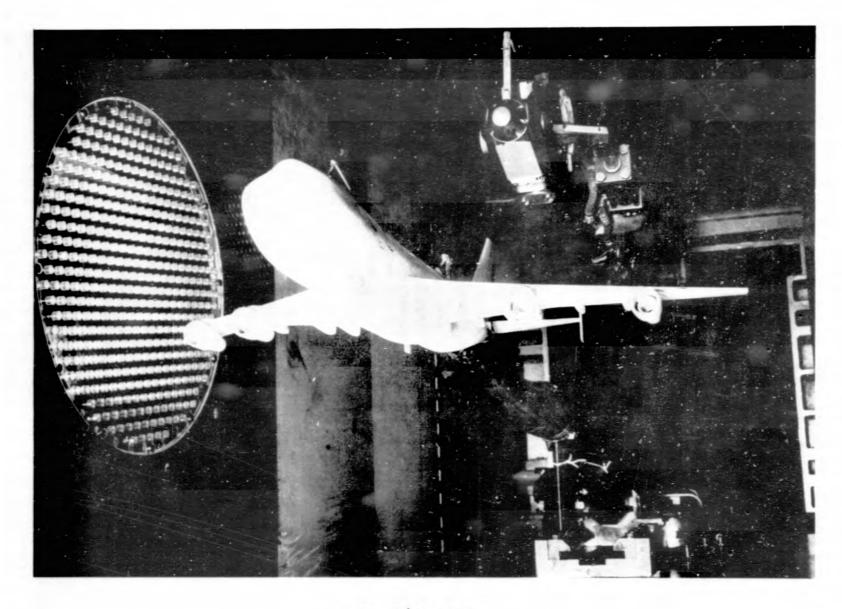
1. Orbiter/747 Moment Transfers (Mated)

Figure 2. Model Instrumentation Sketches
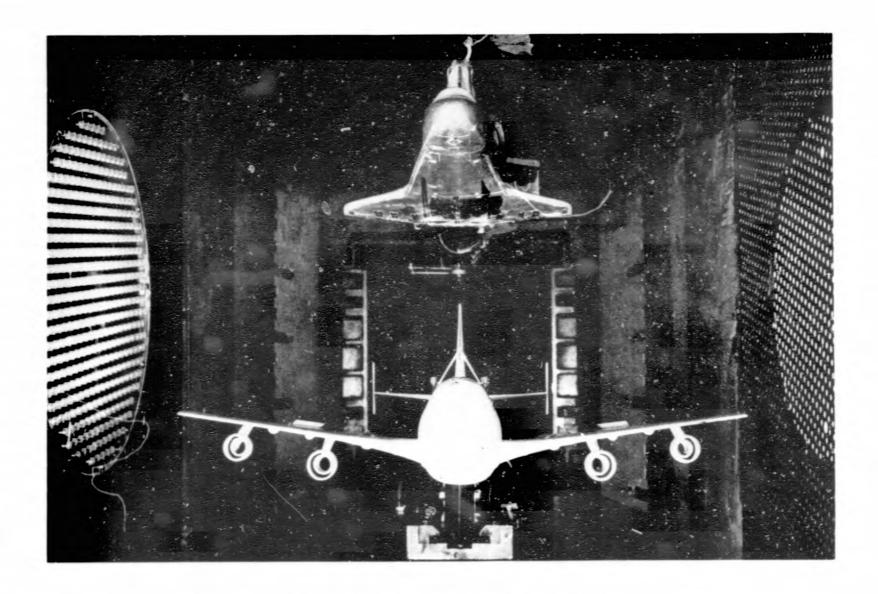
a. Orbiter Alone

Figure 3. Model Installation
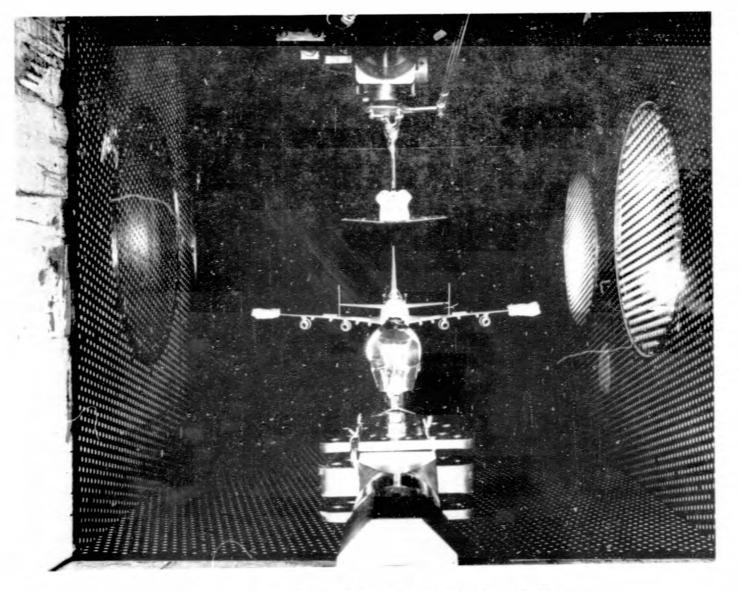
b. 747 Alone

Figure 3. - Model Installation

c. Front View, Orbiter Separating From 747

Figure 3. - Model installation

d.   Rear View, Orbiter Separating From 747
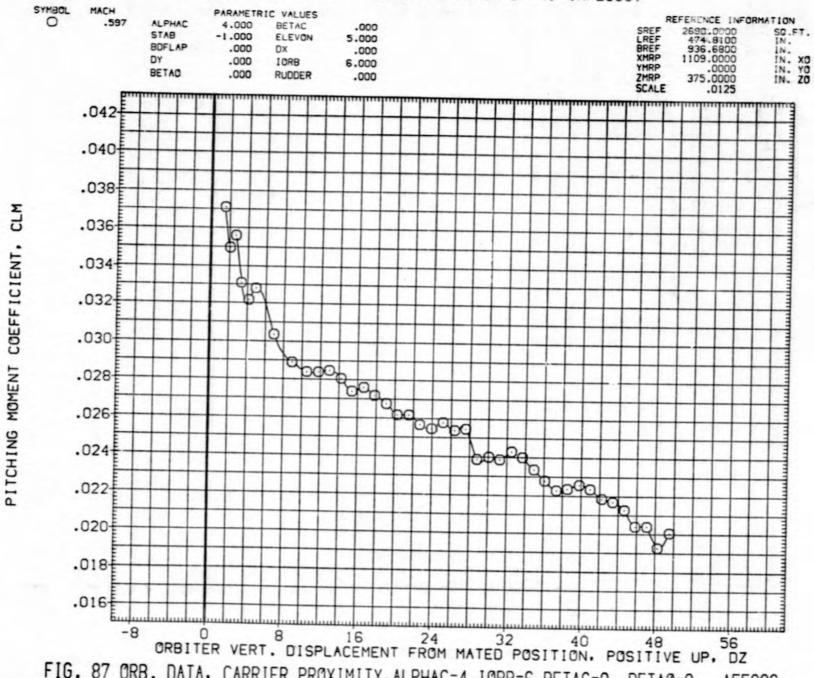
Figure 3.   Model installation

DATA FIGURES
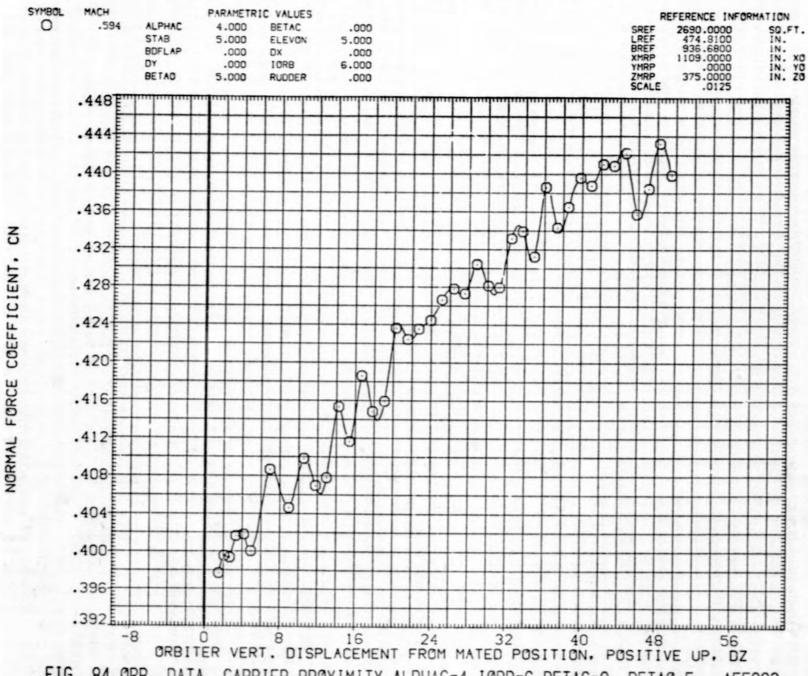
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FIG. 84 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=5, AFE093

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.594	ALPHAC	4.000	BETAC	.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000	LREF	474.8100	IN.
		BDFLAP	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	6.000	XMRP	1109.0000	IN. XO
		BETAO	5.000	RUDDER	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

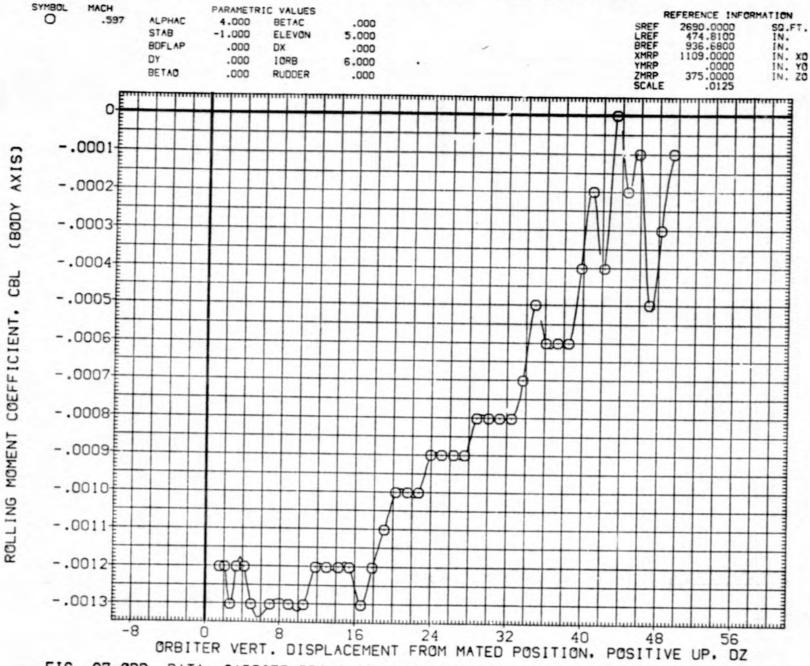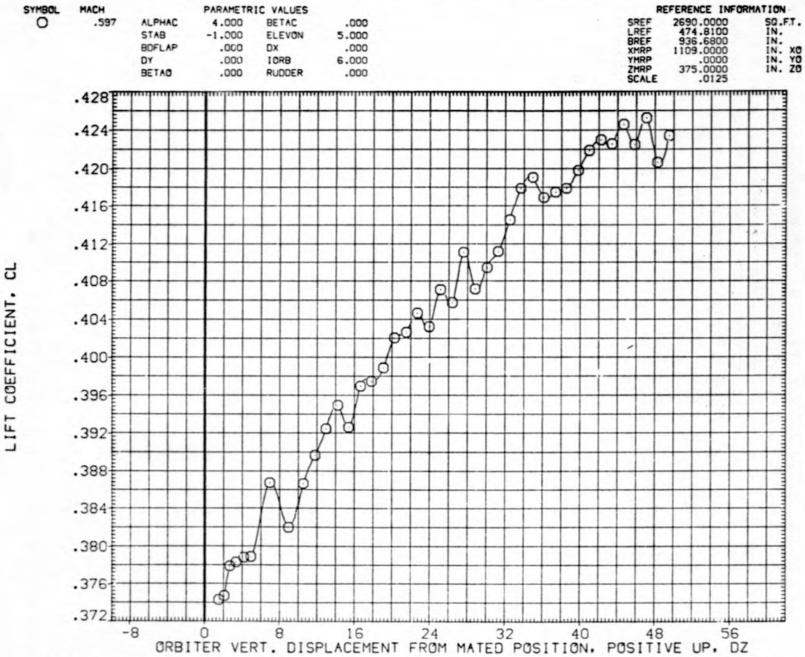FIG. 84 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=6, BETAC=0, BETAO=5, AFE093

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE093)

FIG. 84 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=5, AFE093
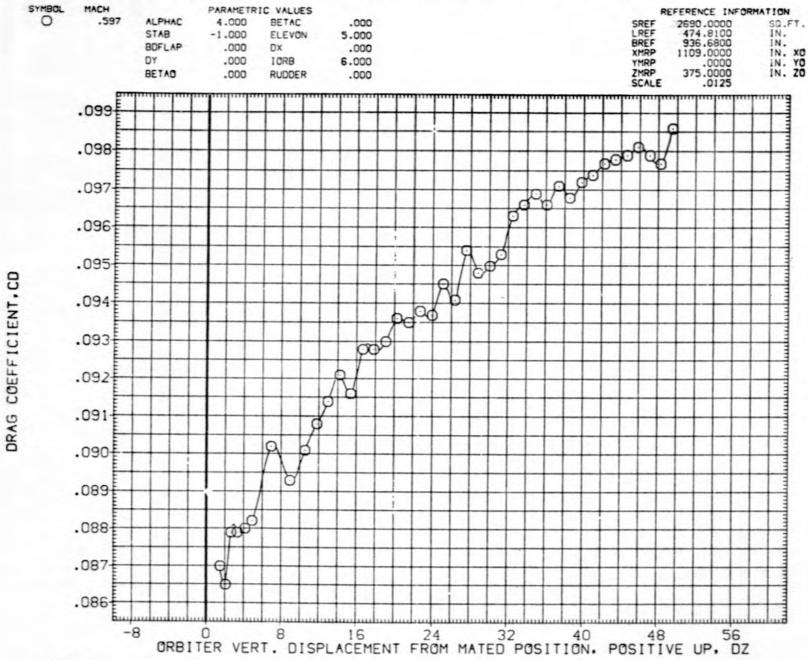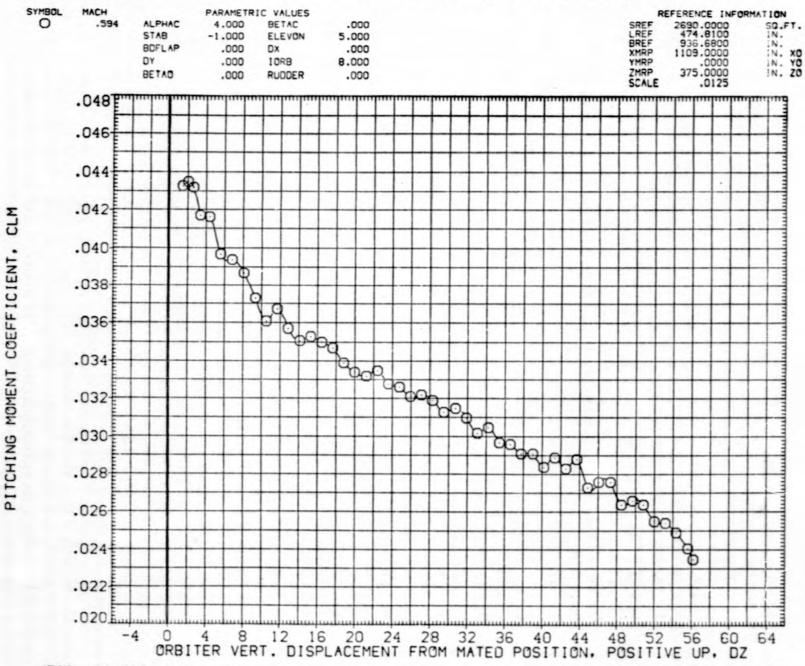
FIG. 84 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=6, BETAC=0, BETAO=5, AFE093

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE093)

FIG. 84 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=5,   AFE093

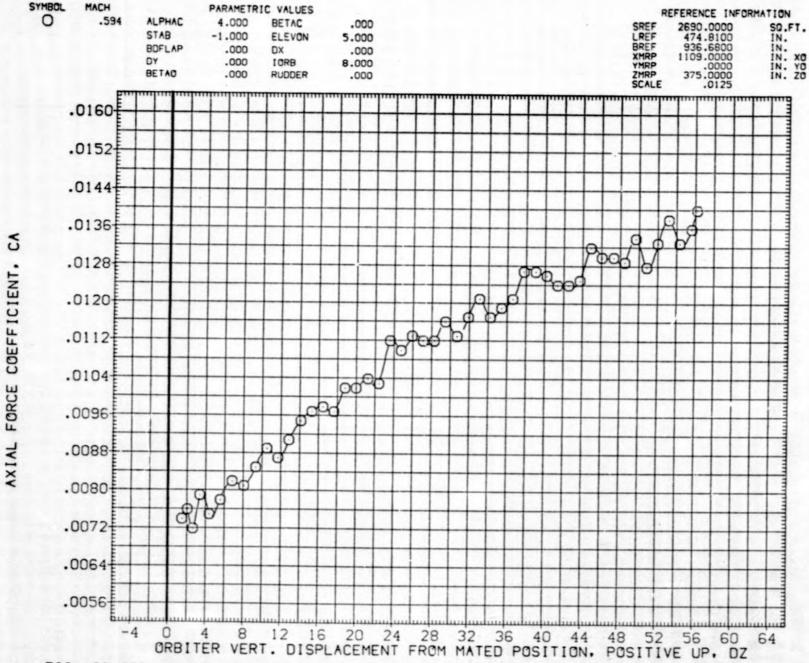LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE093)

SYMBOL	MACH		PARAMETRIC VALUES			REFERENCE INFORMATION		
O	.594	ALPHAC	4.000	BETAC	.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000	LREF	474.8100	IN.
		BDFLAP	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	6.000	XMRP	1109.0000	IN. XO
		BETAO	5.000	RUDDER	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	
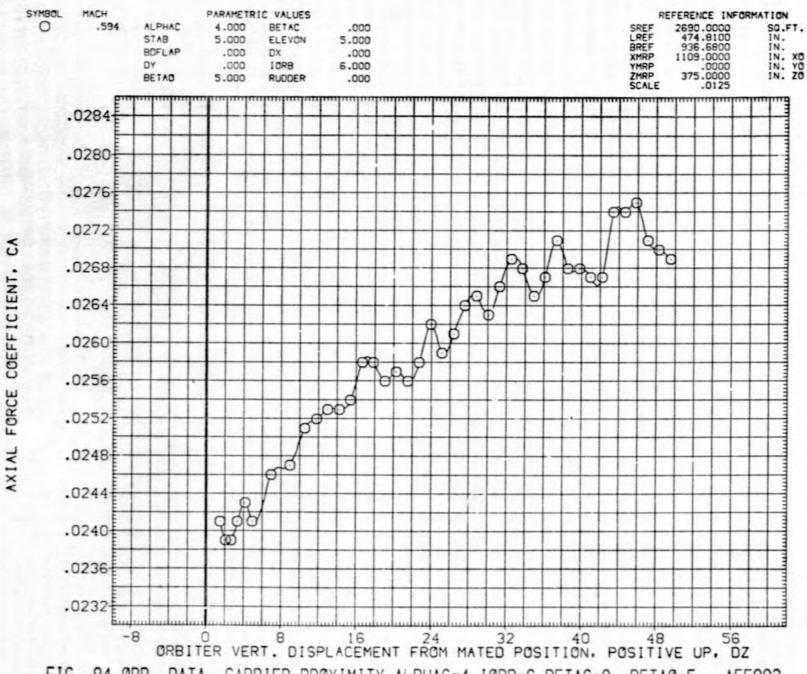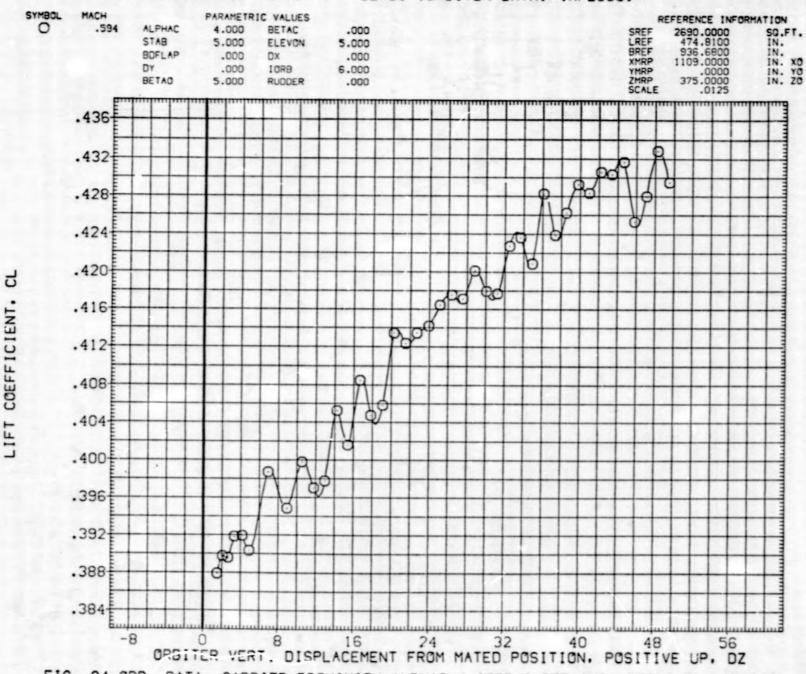
FIG. 84 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=5, AFE093

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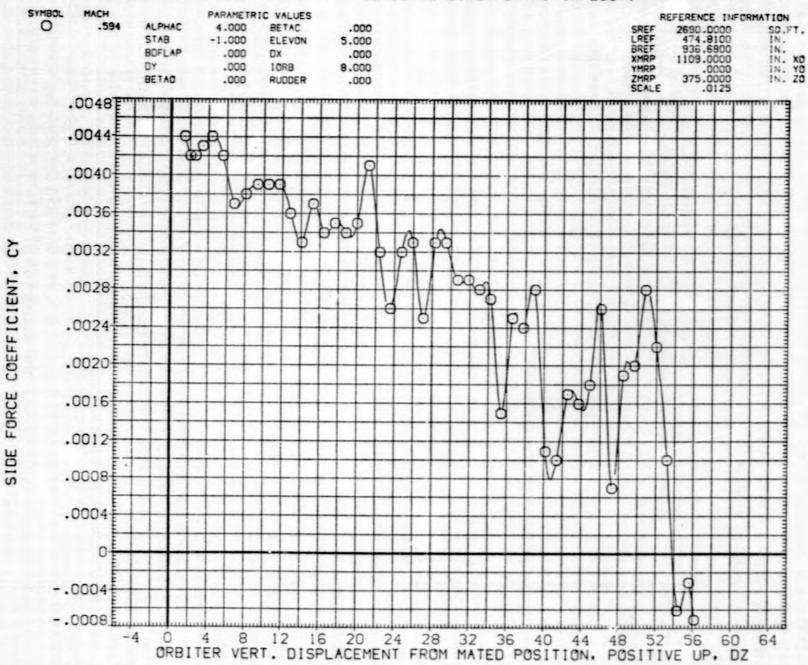LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE093)

FIG. 84 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=6, BETAC=0, BETAO=5, AFE093

LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFEO93)
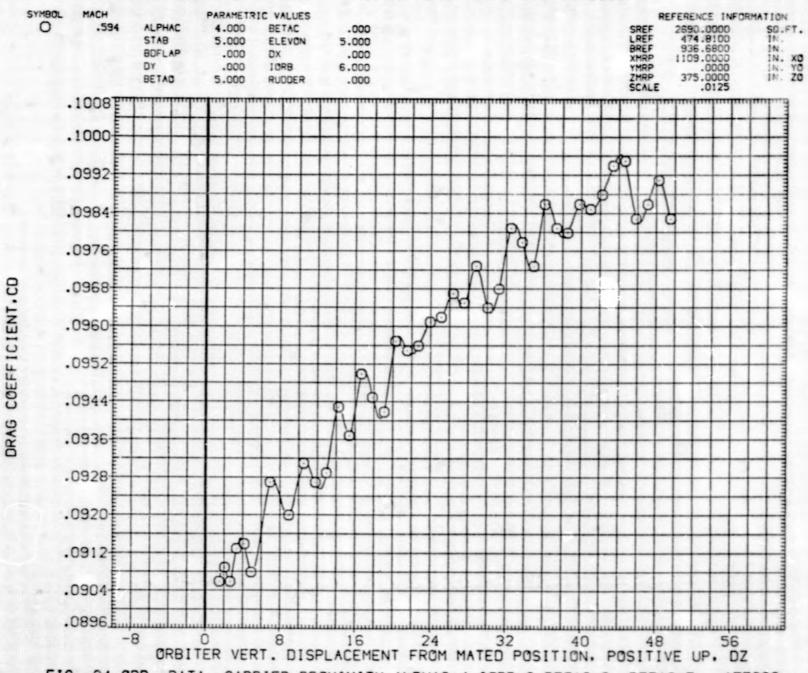
FIG. 84 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=5, AFEO93

FIG. 85 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=5, AFE094

FIG. 85 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=8, BETAC=0, BETAO=5, AFE094

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE094)

FIG. 85 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=5, AFE094

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE094)

FIG. 85 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=8, BETAC=0, BETAO=5, AFE094

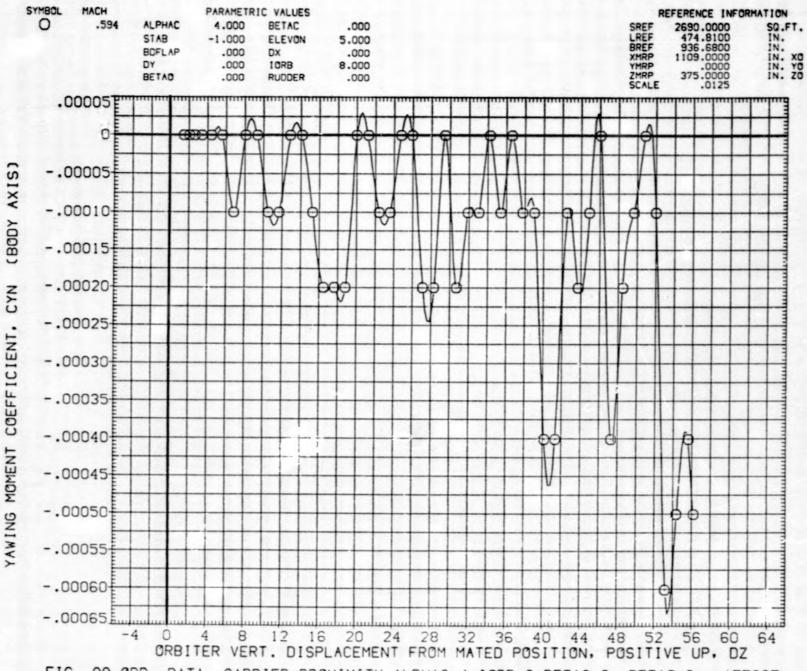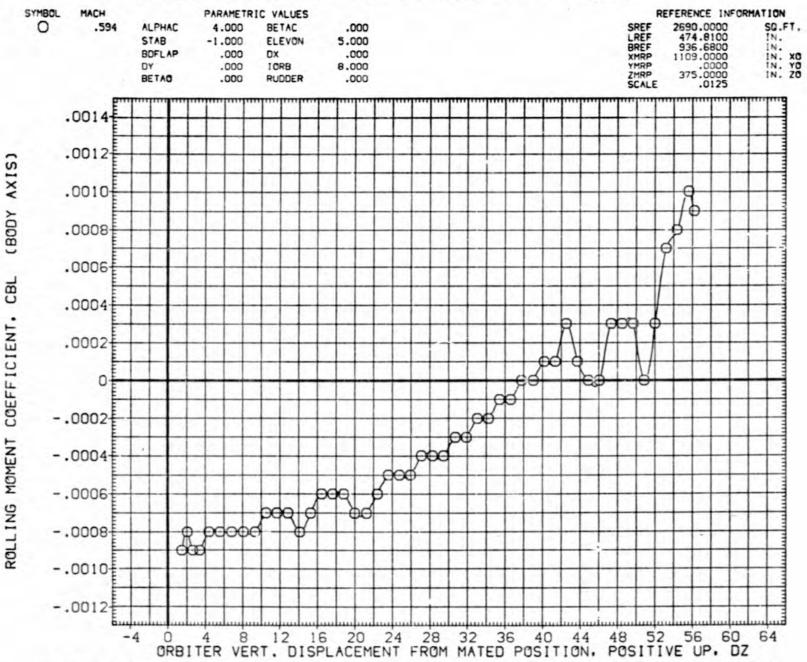LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFEO94)
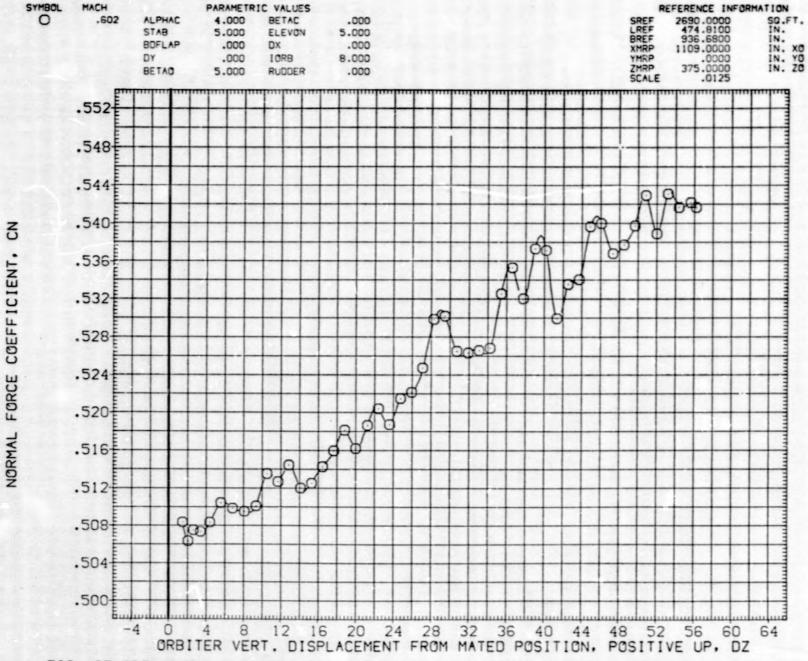
FIG. 85 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=5, AFEO94

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE094)

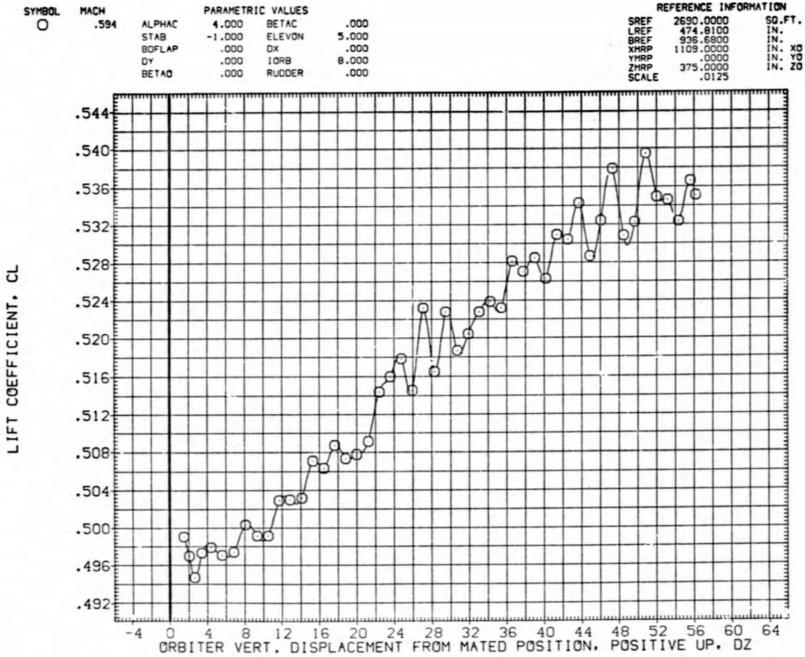FIG. 85 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=8, BETAC=0, BETAO=5, AFE094

LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE094)

FIG. 85 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=5,   AFE094

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE094)
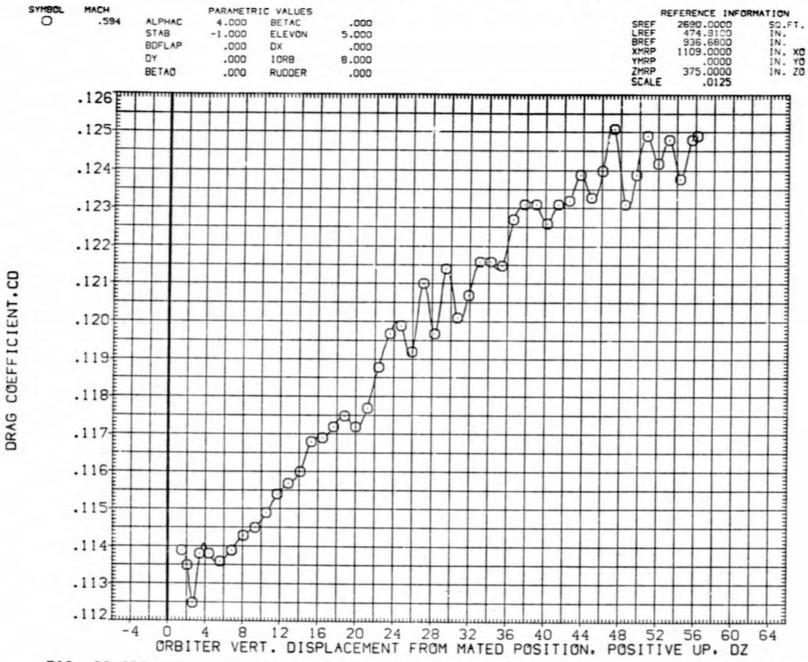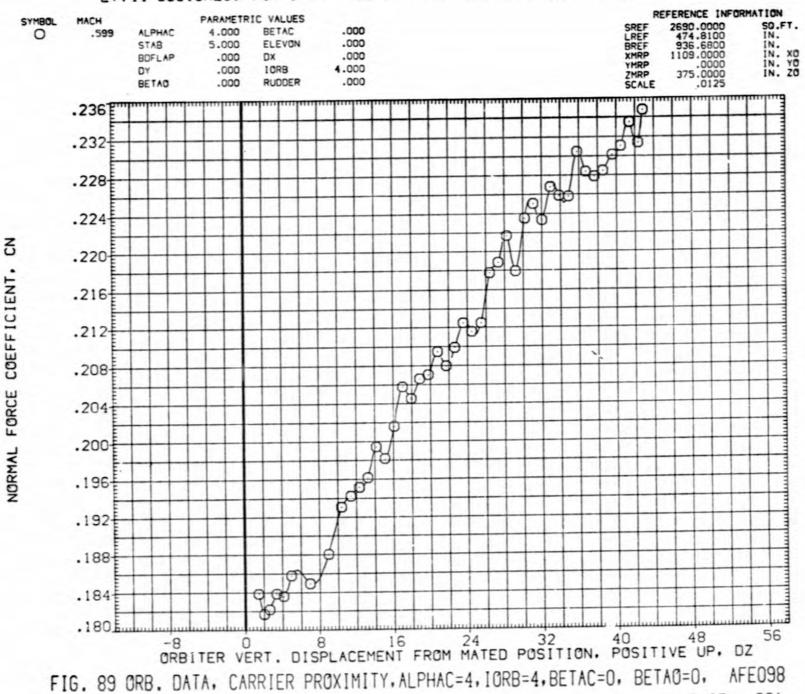
FIG. 85 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=8, BETAC=0, BETAO=5, AFE094

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE095)

FIG. 86 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=4,BETAC=0, BETAO=0, AFE095
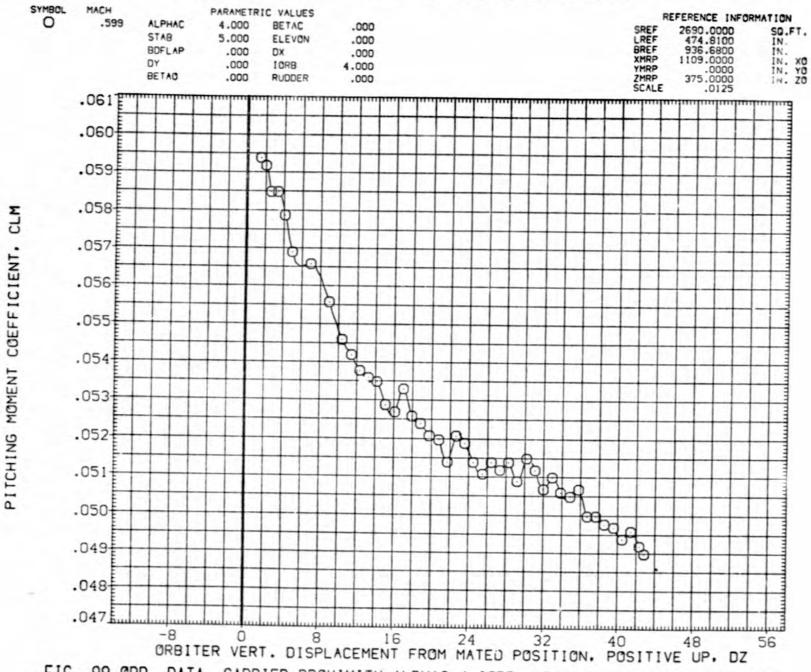
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE095)

FIG. 86 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=0, BETAO=0, AFE095

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE095)

FIG. 86 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=0, BETA0=0, AFE095

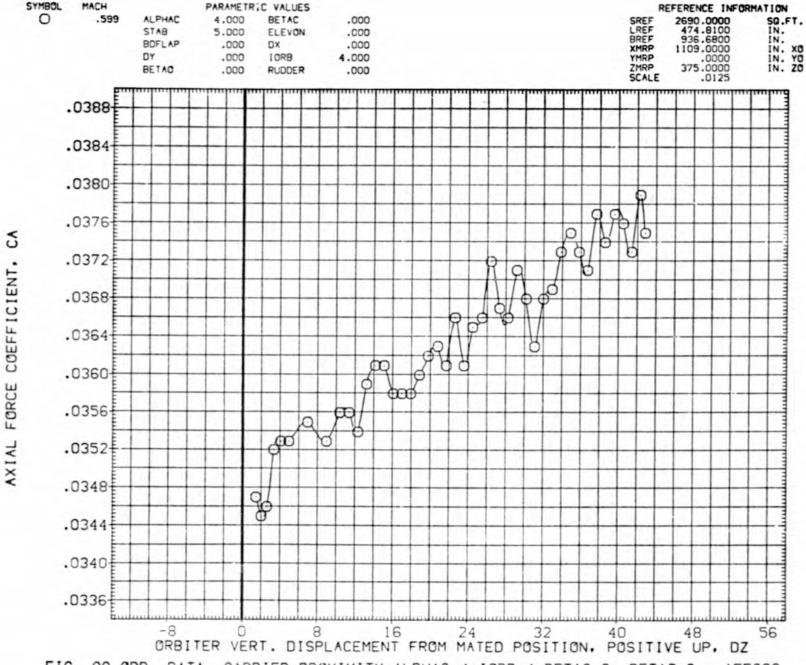LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFEO95)

FIG. 86 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=4,BETAC=0, BETAO=0, AFEO95

LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE095)

FIG. 86 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=4,BETAC=0, BETAO=0, AFE095
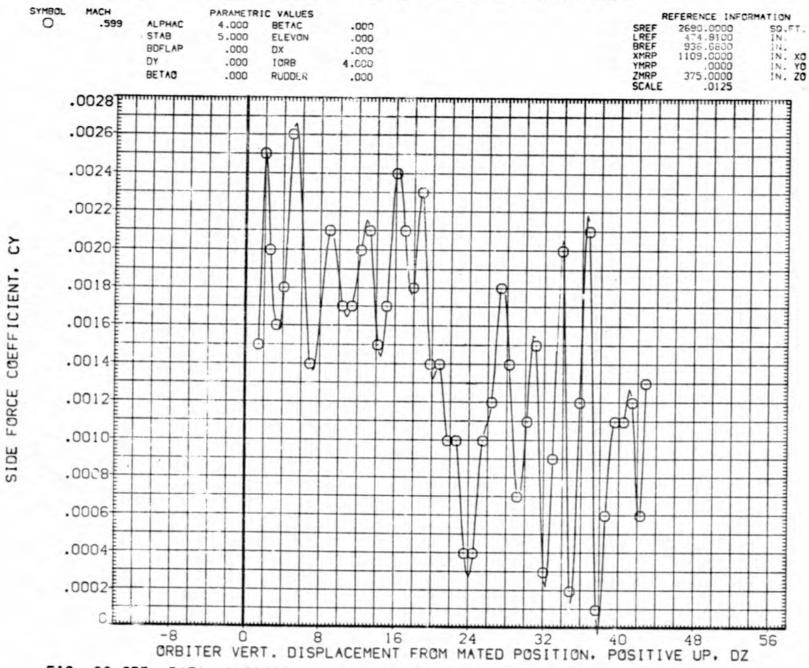
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE095)

FIG. 86 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=0, BETAO=0, AFE095

FIG. 86 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=0, BETAO=0, AFE095
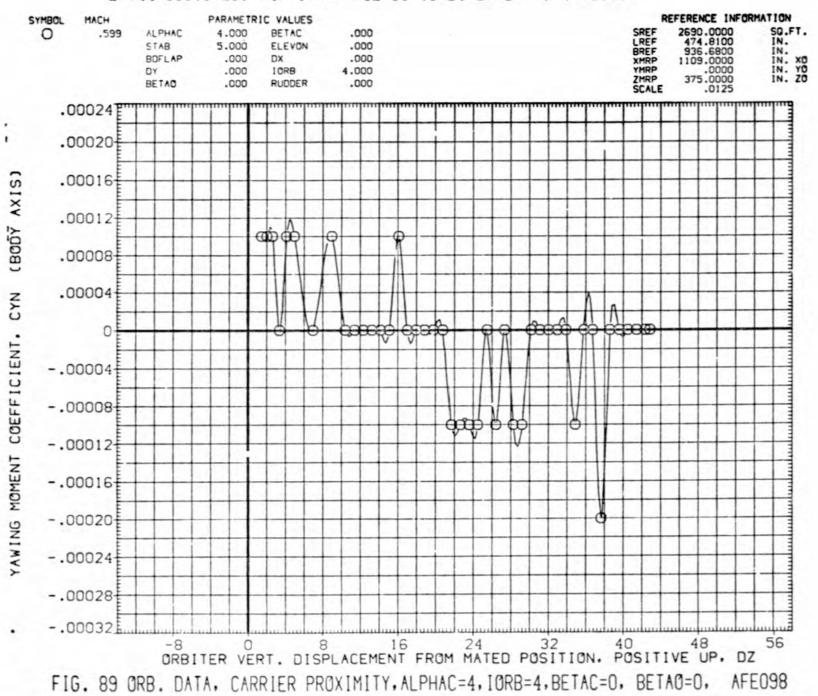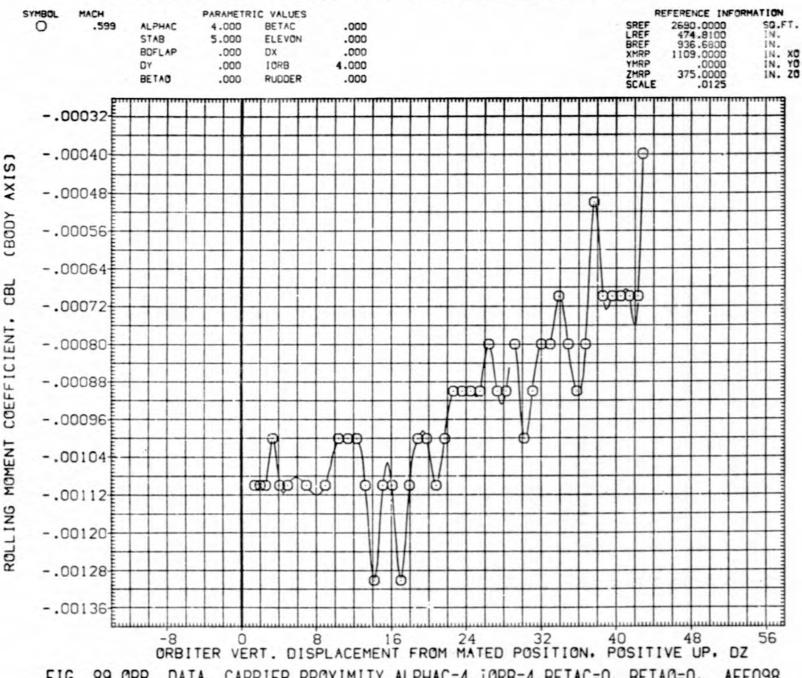
LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFEO95)

FIG. 86 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=0, BETAO=0, AFEO95

SYMBOL   MACH   PARAMETRIC VALUES   REFERENCE INFORMATION

O   .597   ALPHAC   4.000   BETAC   .000   SREF   2690.0000   SQ.FT.
                   STAB   -1.000   ELEVON   5.000   LREF   474.8100   IN.
                   BDFLAP   .000   DX   .000   BREF   936.6800   IN.
                   DY   .000   IORB   6.000   XMRP   1109.0000   IN. XO
                   BETAO   .000   RUDDER   .000   YMRP   .0000   IN. YO
                                                             ZMRP   375.0000   IN. ZO
                                                             SCALE   .0125
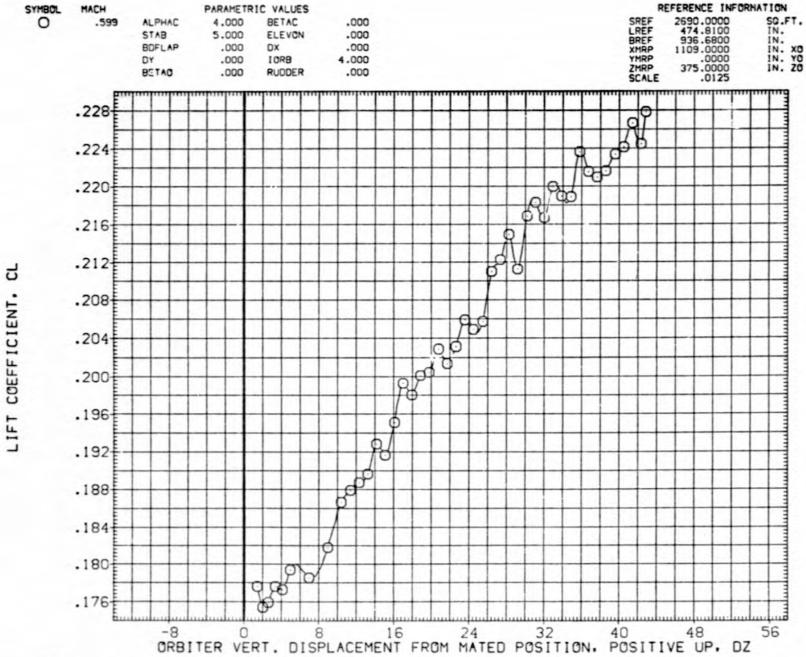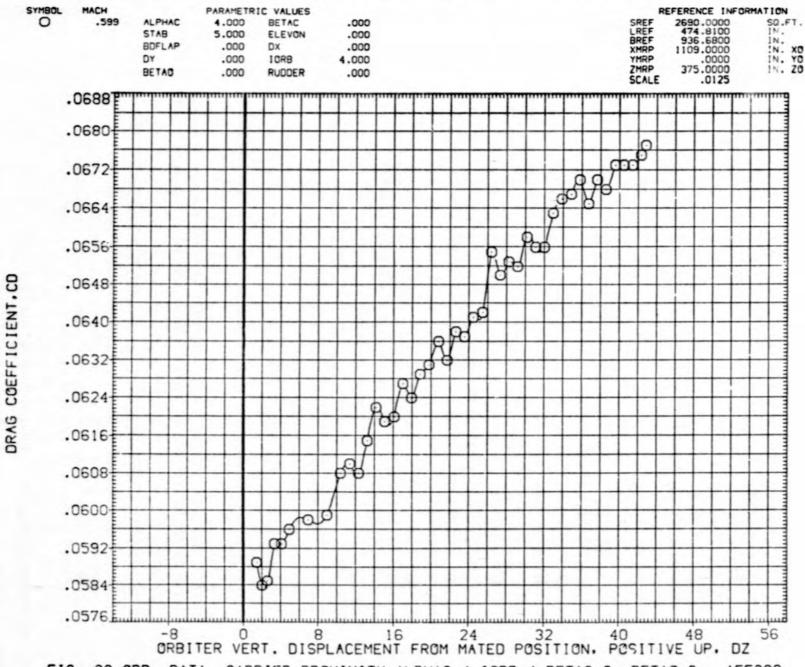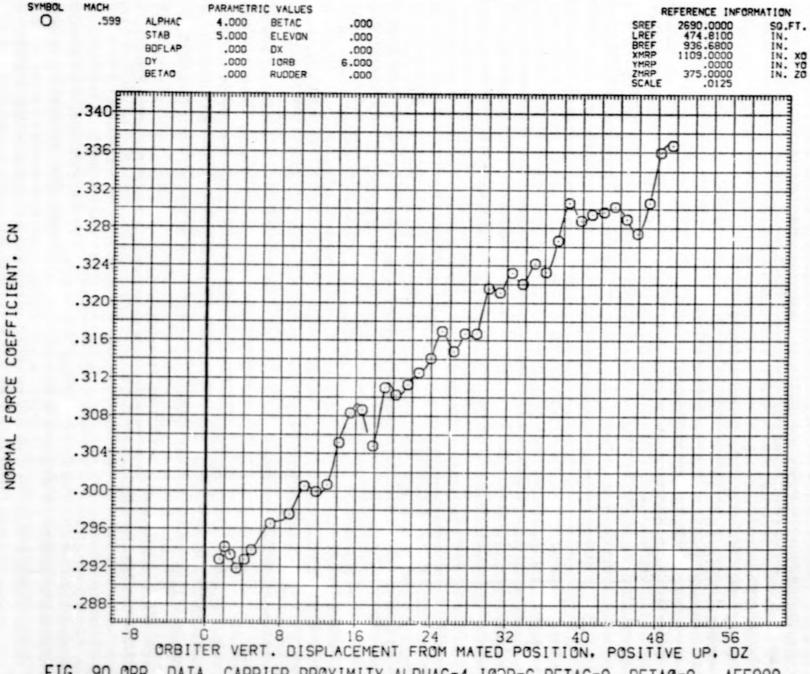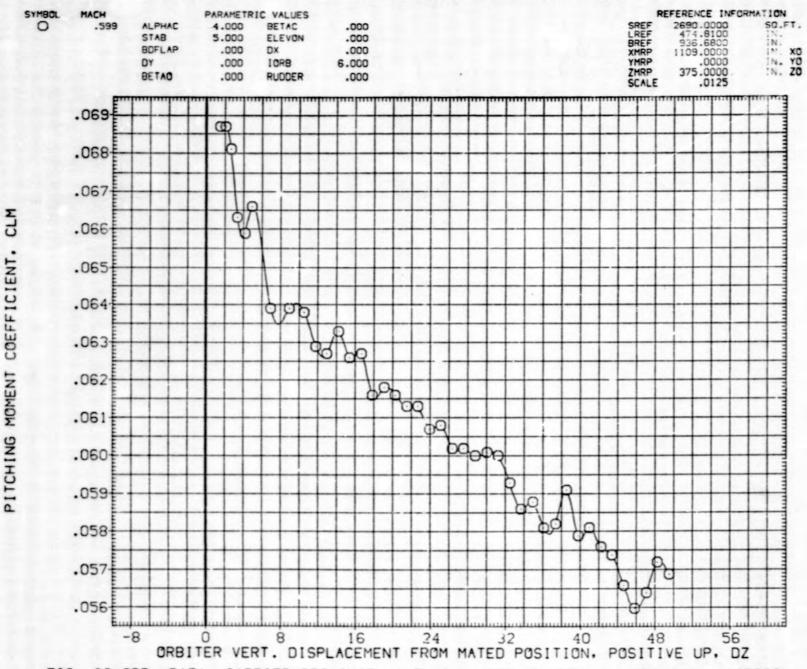
FIG. 87 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=6, BETAC=0, BETAO=0, AFE096

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE096)

FIG. 87 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE096

LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFEO96)

PARAMETRIC VALUES

ALPHAC	4.000	BETAC	.000
STAB	-1.000	ELEVON	5.000
BDFLAP	.000	DX	.000
DY	.000	IORB	6.000
BETAO	.000	RUDDER	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

FIG. 87 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFEO96

FIG. 87 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=6, BETAC=0, BETAO=0, AFE096

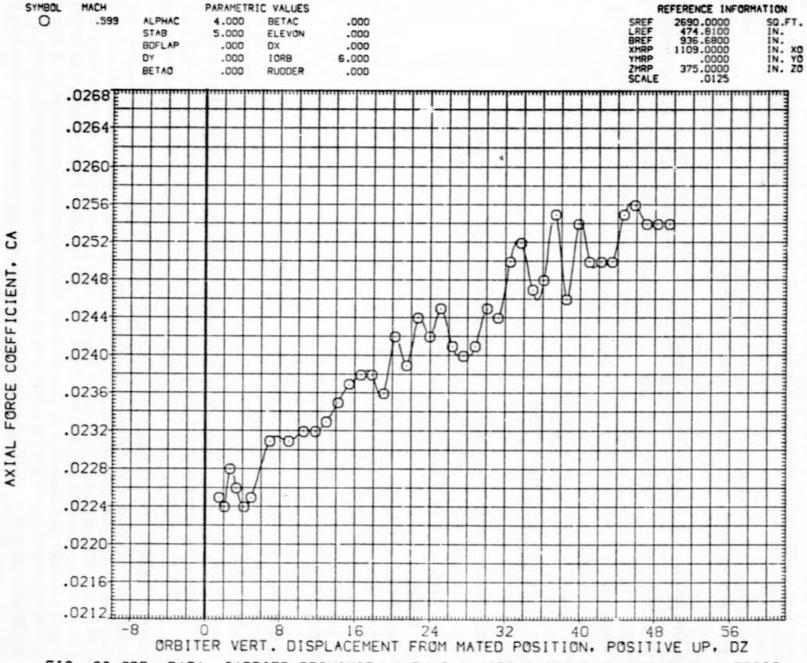FIG. 87 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFEO96

FIG. 87 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE096

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE096)

FIG. 87 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE096
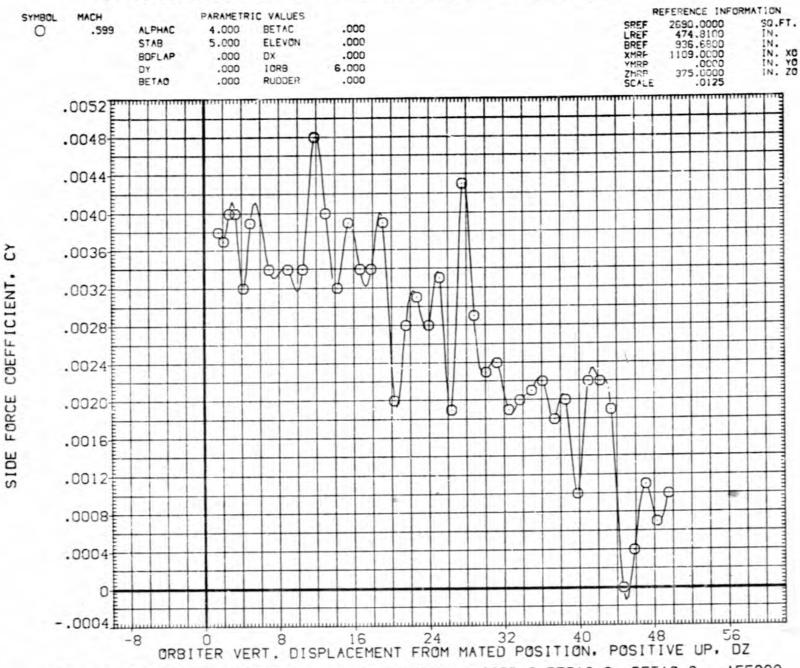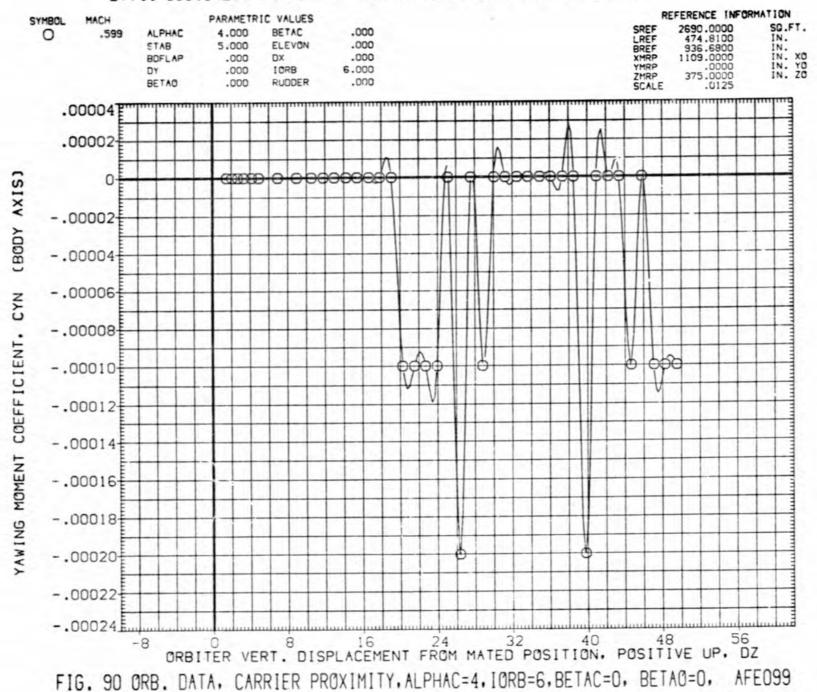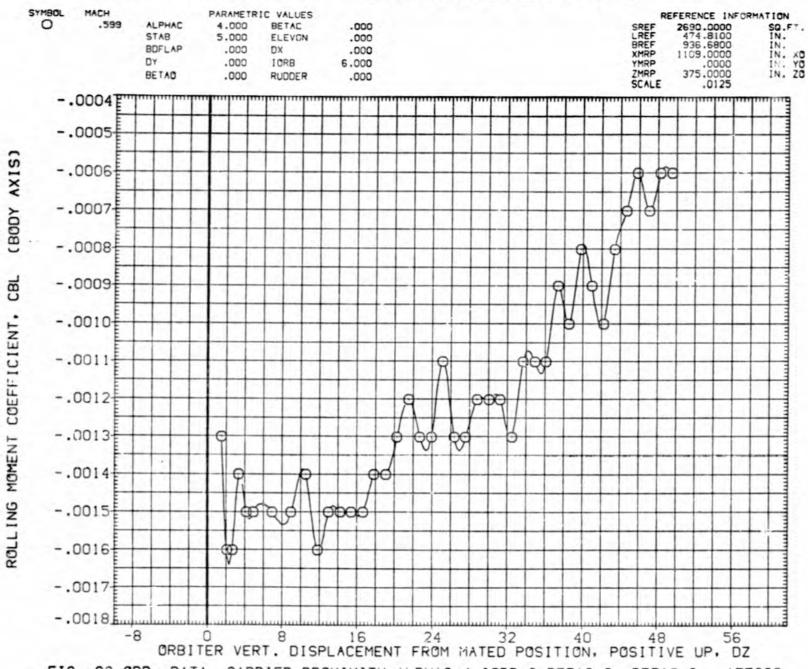
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE096)

SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.597	ALPHAC	4.000	BETAC	.000	SREF	2690.0000	SQ.FT.
		STAB	-1.000	ELEVON	5.000	LREF	474.8100	IN.
		BDFLAP	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	6.000	XMRP	1109.0000	IN. XO
		BETAO	.000	RUDDER	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

FIG. 87 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE096

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE097)

FIG. 88 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=8, BETAC=0, BETAO=0, AFE097
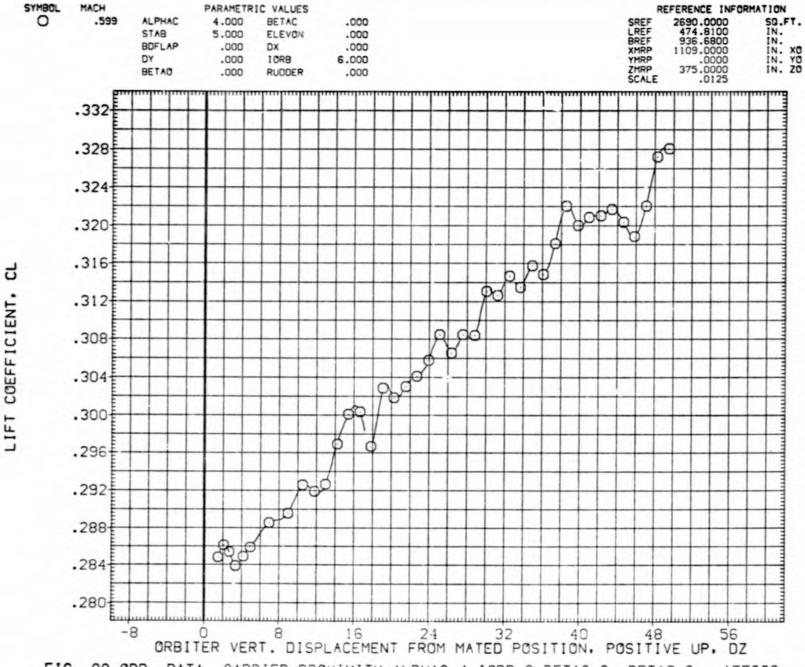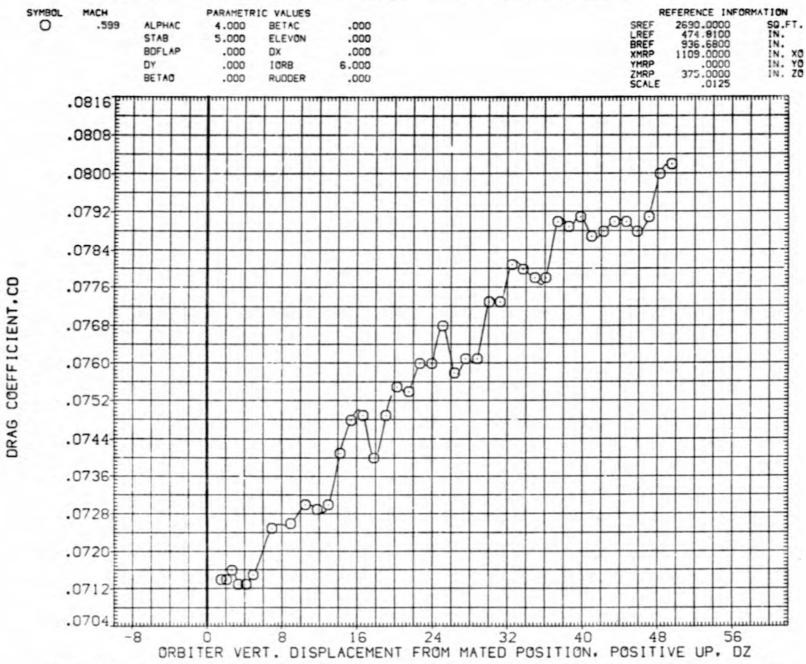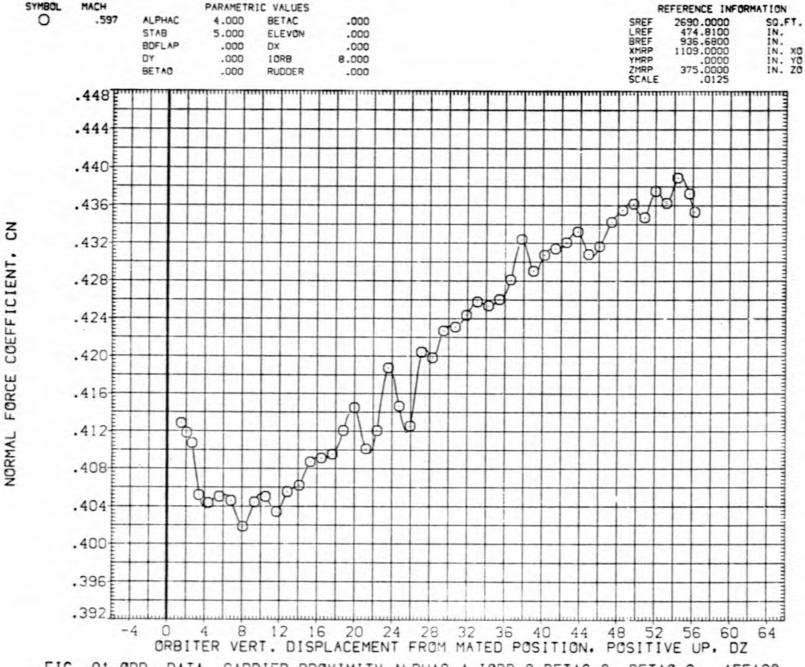
LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE097)

FIG. 88 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=8, BETAC=0, BETAO=0, AFE097

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LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE097)

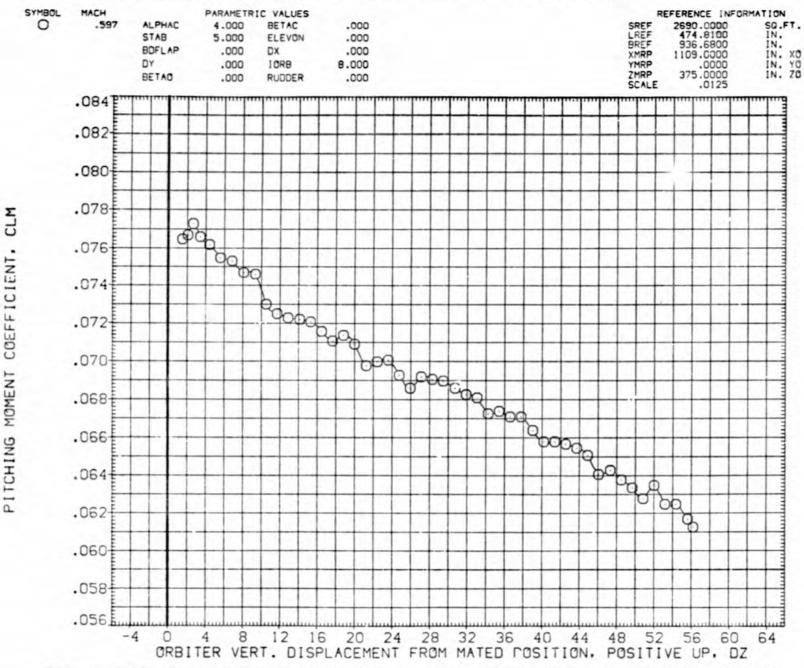FIG. 88 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE097

FIG. 88 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=8, BETAC=0, BETAO=0, AFE097

LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE097)

FIG. 88 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE097

FIG. 88 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=8, BETAC=0, BETA0=0, AFE097
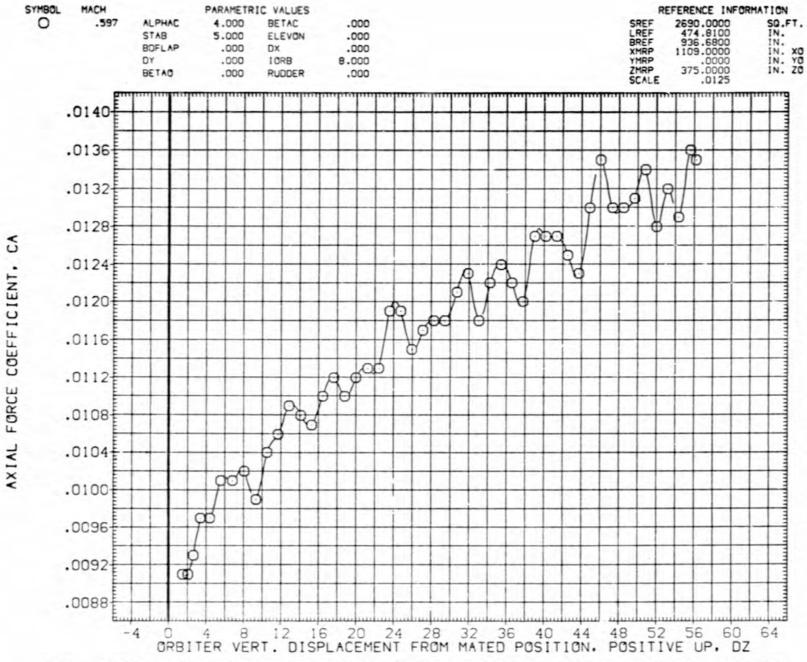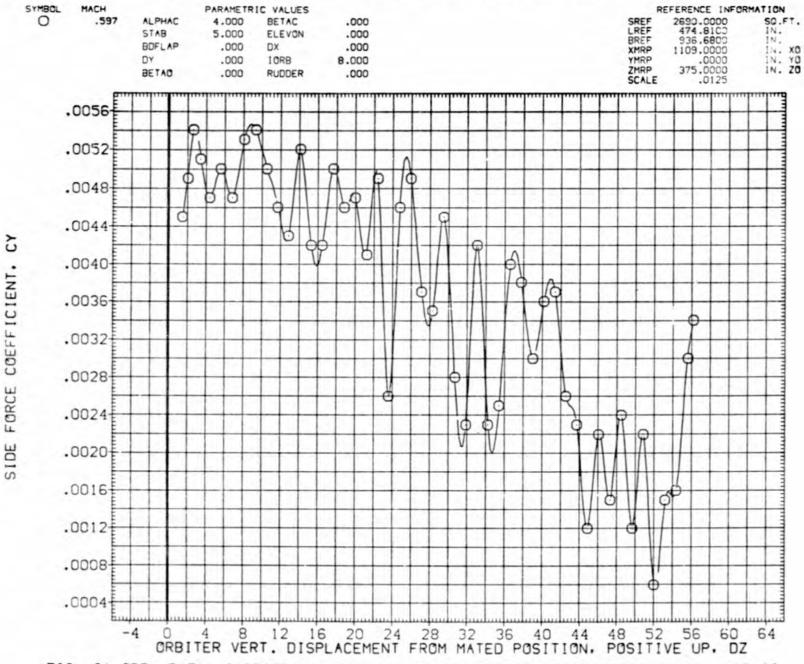
LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFEO97)

FIG. 88 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFEO97

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE097)

FIG. 88 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=8, BETAC=0, BETA0=0, AFE097

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LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE098)

SYMBOL	MACH		PARAMETRIC VALUES		
O	.599	ALPHAC	4.000	BETAC	.000
		STAB	5.000	ELEVON	.000
		BDFLAP	.000	DX	.000
		DY	.000	IORB	4.000
		BETAO	.000	RUDDER	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

NORMAL FORCE COEFFICIENT, CN

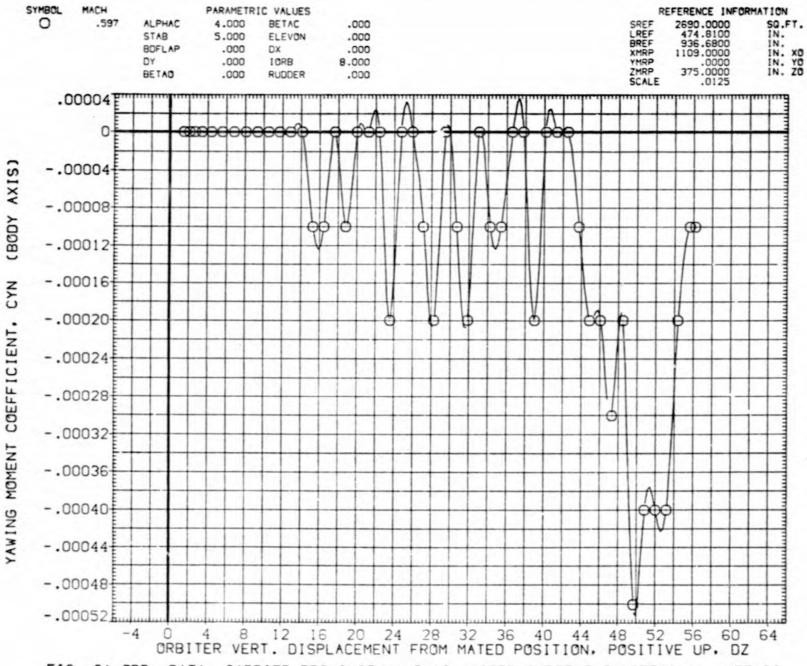ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG. 89 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=4,BETAC=0, BETAO=0, AFE098

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE098)

FIG. 89 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=0, BETAO=0, AFE098
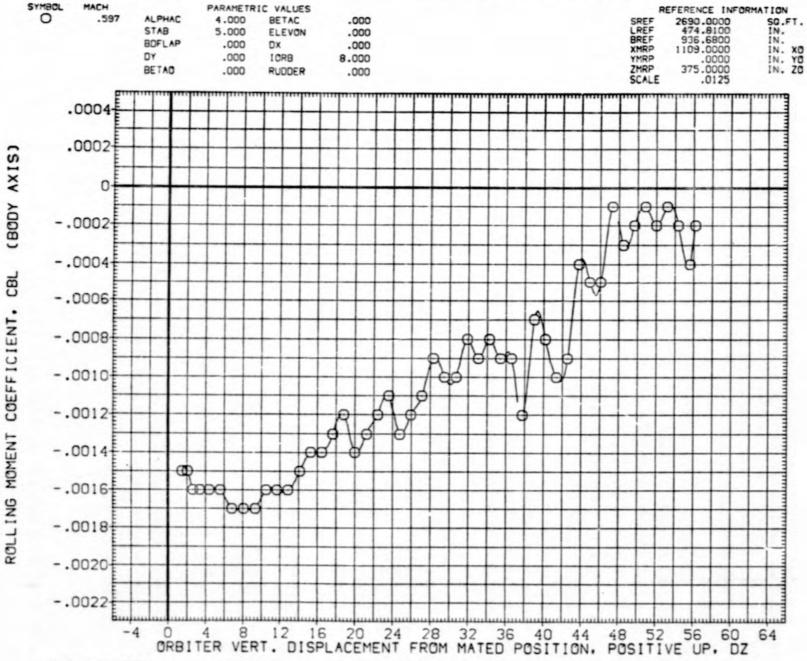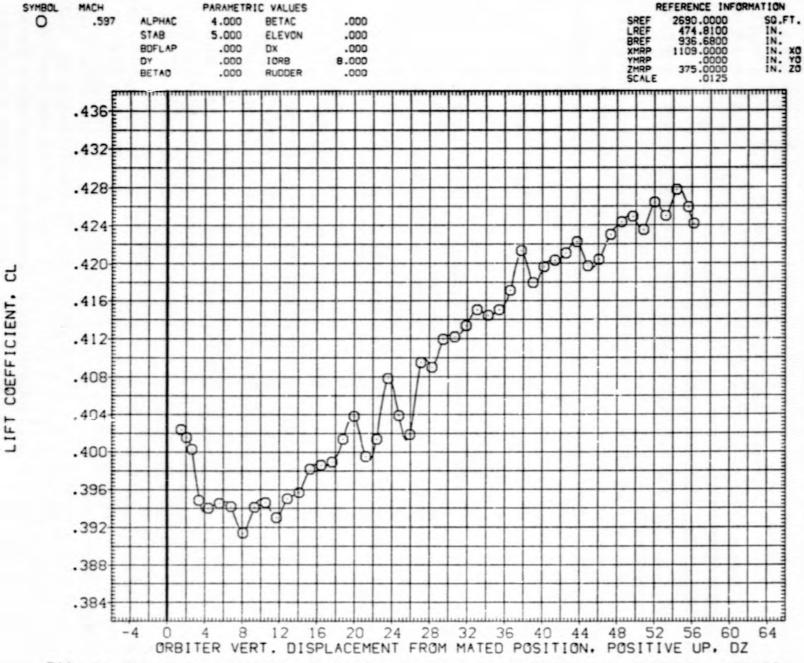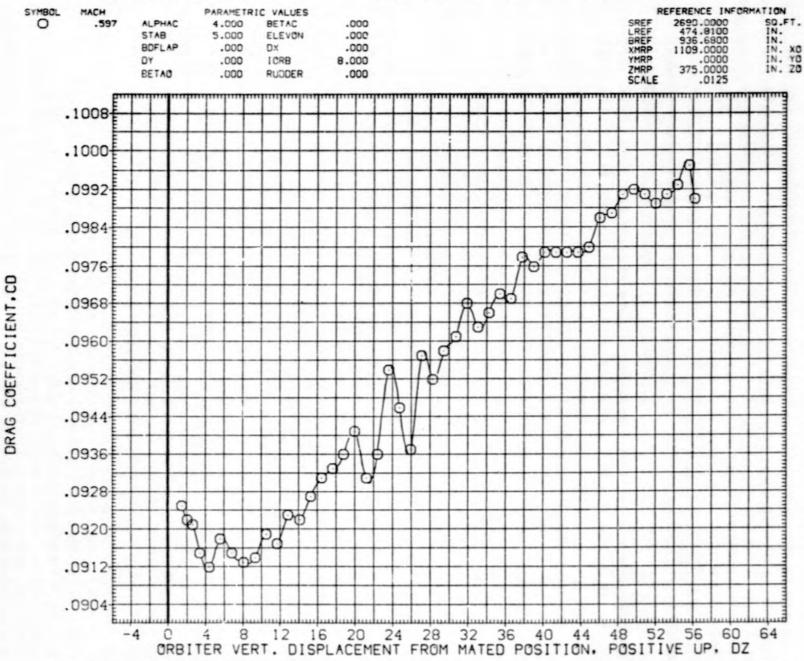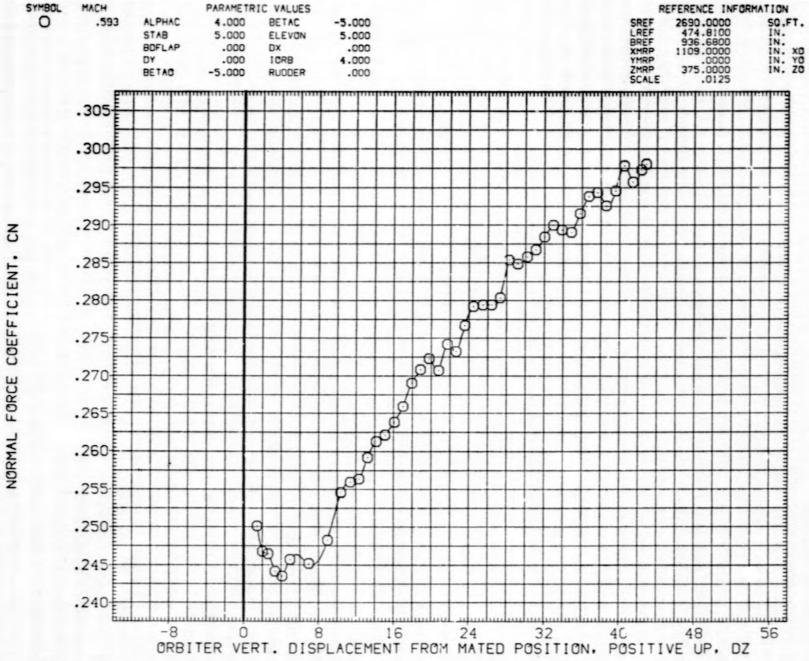
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE098)

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.599	ALPHAC	4.000	BETAC	.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	ELEVON	.000	LREF	474.8100	IN.
		BDFLAP	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	4.000	XMRP	1109.0000	IN. XO
		BETAO	.000	RUDDER	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

FIG. 89 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=0, BETAO=0, AFE098

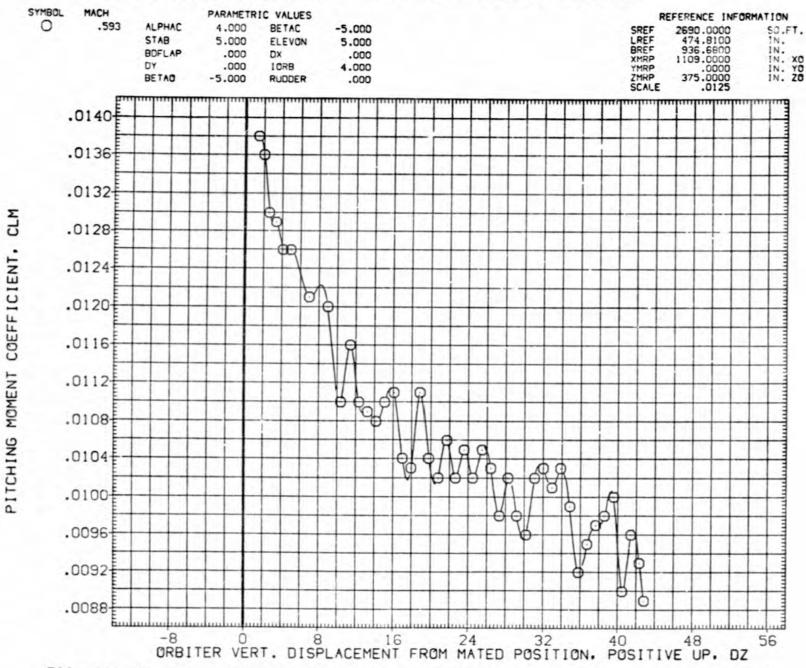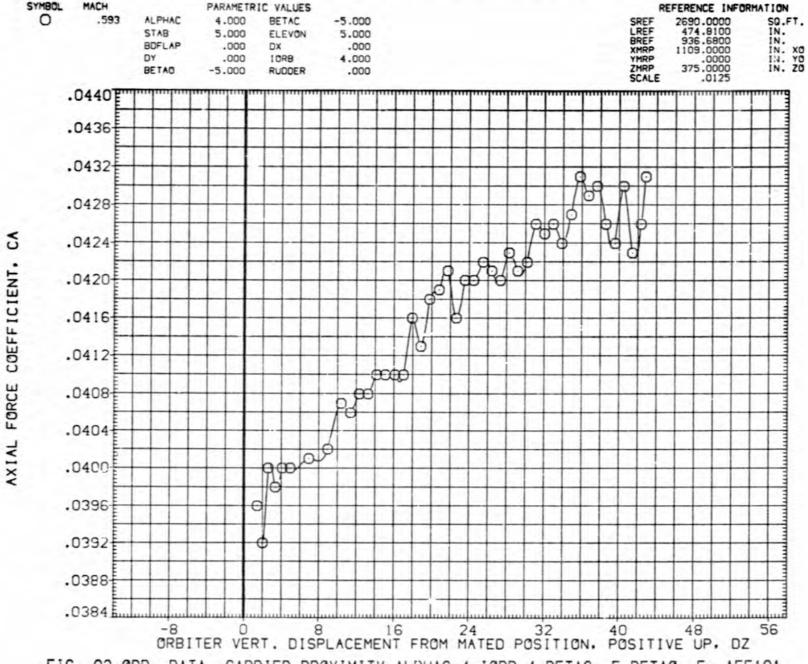LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE098)

FIG. 89 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=0, BETAO=0, AFE098
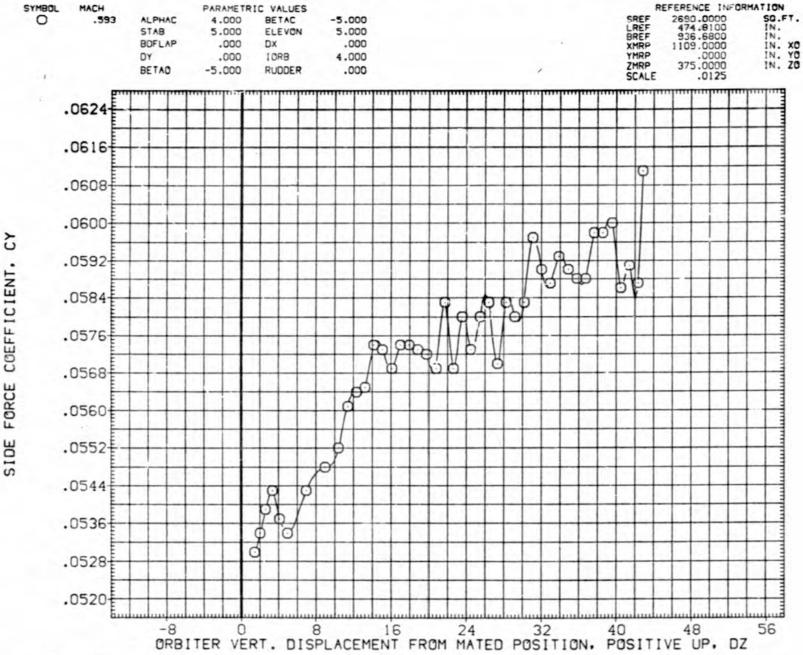
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE098)

FIG. 89 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=4,BETAC=0, BETAO=0, AFE098

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE098)

FIG. 89 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,iORB=4,BETAC=0, BETAO=0, AFE098

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE098)

FIG. 89 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=0, BETAO=0, AFE098
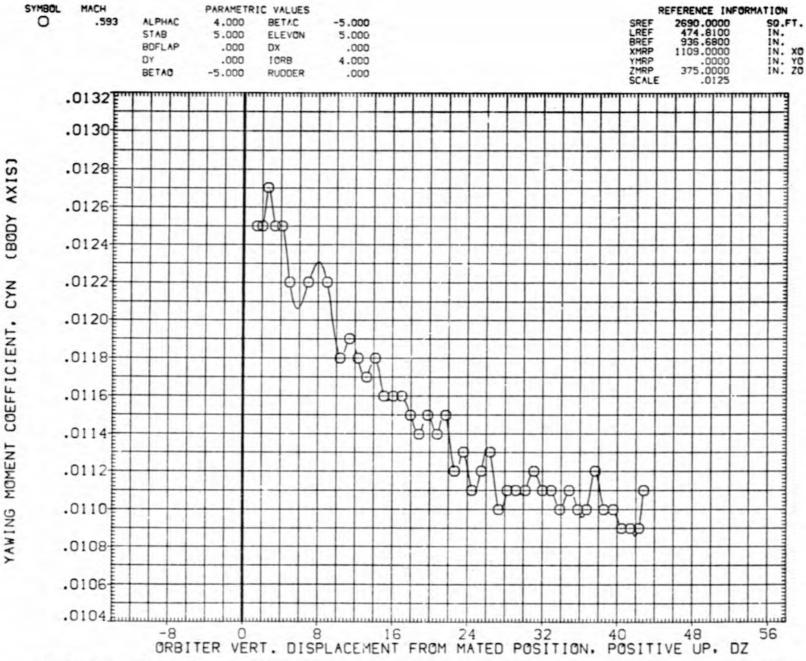
FIG. 89 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=0, BETAO=0, AFE098

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE099)

FIG. 90 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE099

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE099)

FIG. 90 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE099
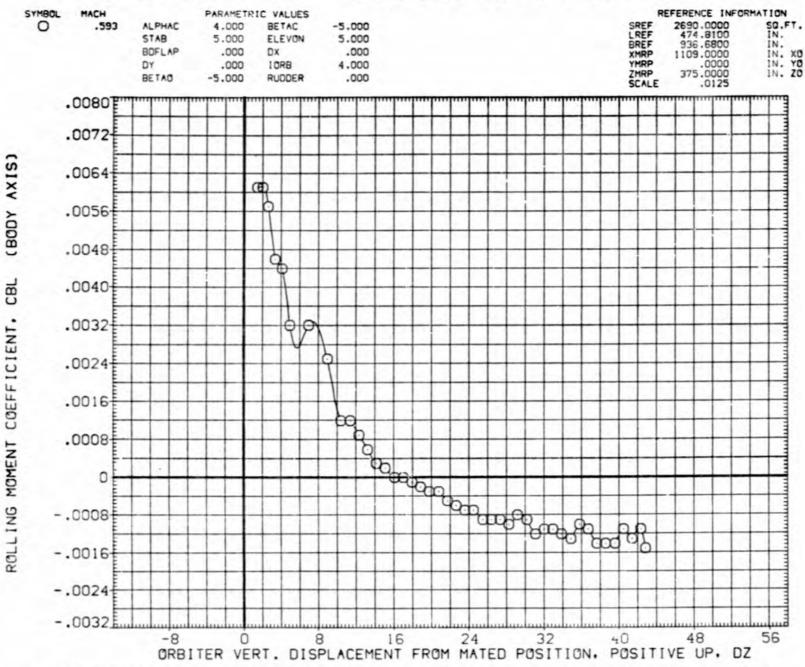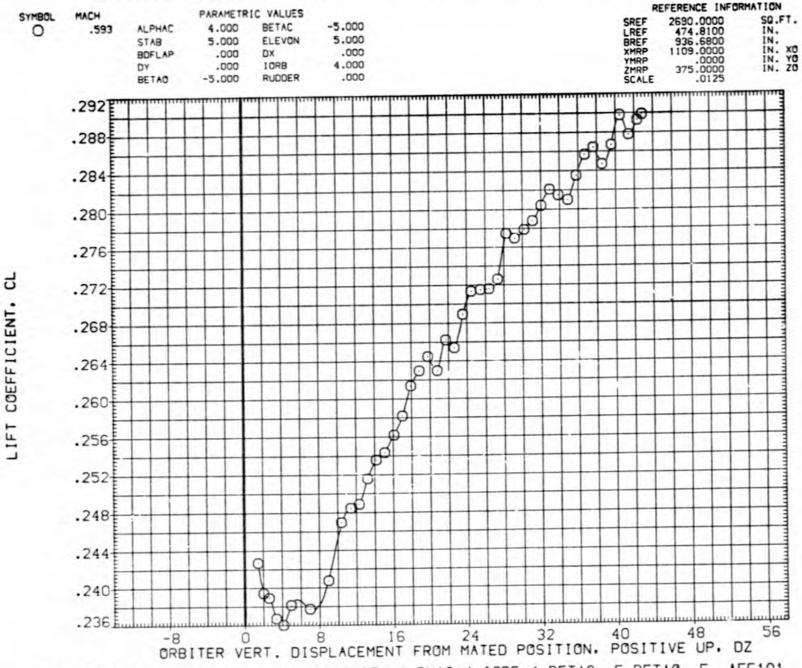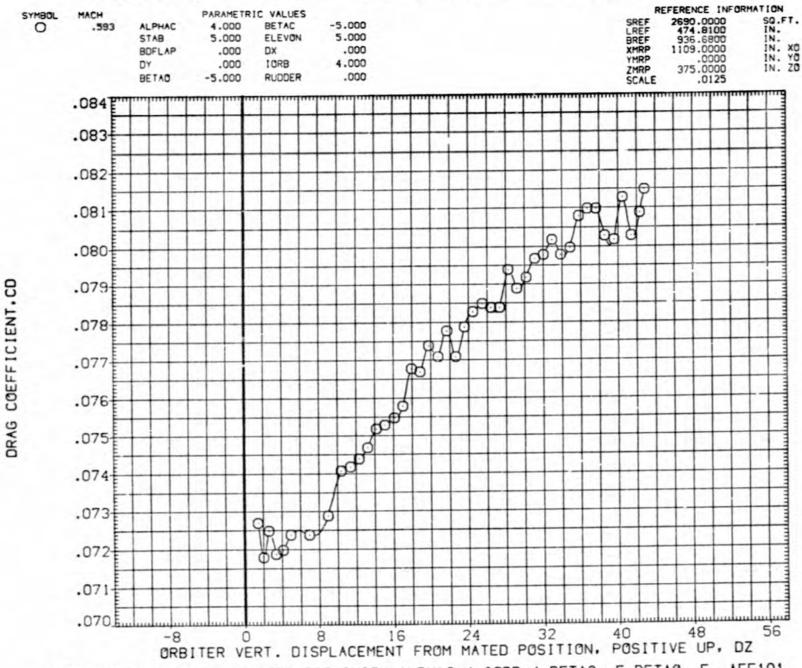
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE099)

FIG. 90 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=6, BETAC=0, BETAO=0, AFE099

FIG. 90 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE099

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE099)

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.599	ALPHAC	4.000	BETAC	.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	ELEVON	.000	LREF	474.8100	IN.
		BDFLAP	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	6.000	XMRP	1109.0000	IN. XO
		BETAO	.000	RUDDER	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

FIG. 90 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE099
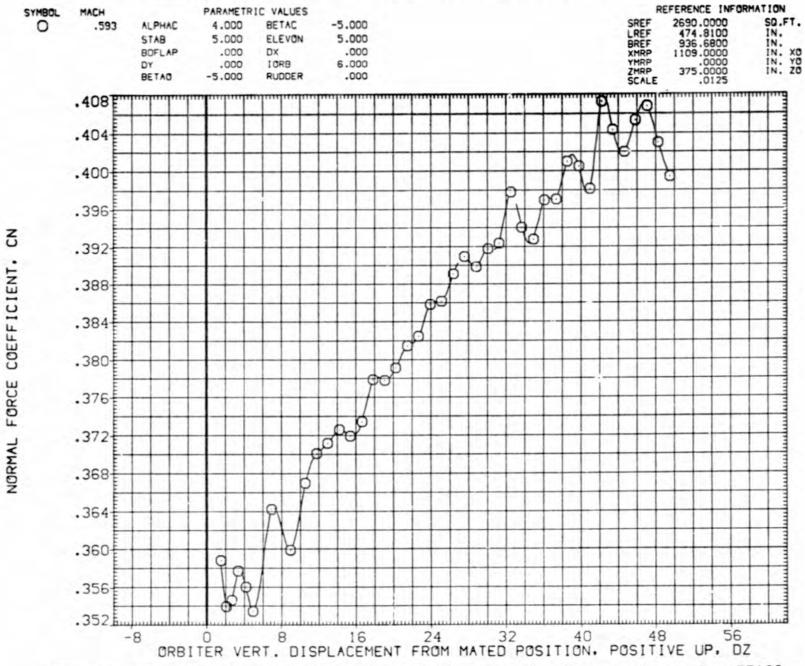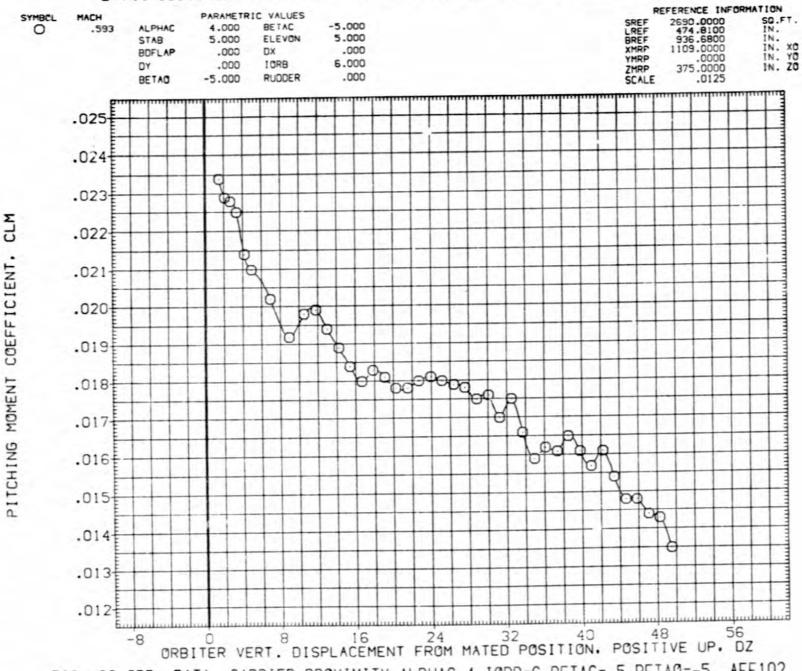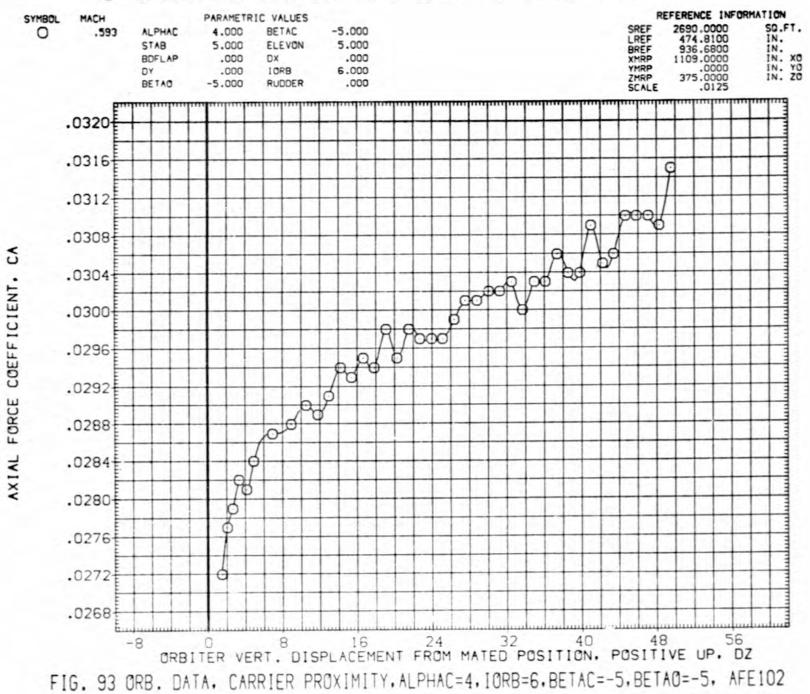
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE099)

FIG. 90 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETA0=0, AFE099

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFEO99)

FIG. 90 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFEO99

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE099)

FIG. 90 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE099
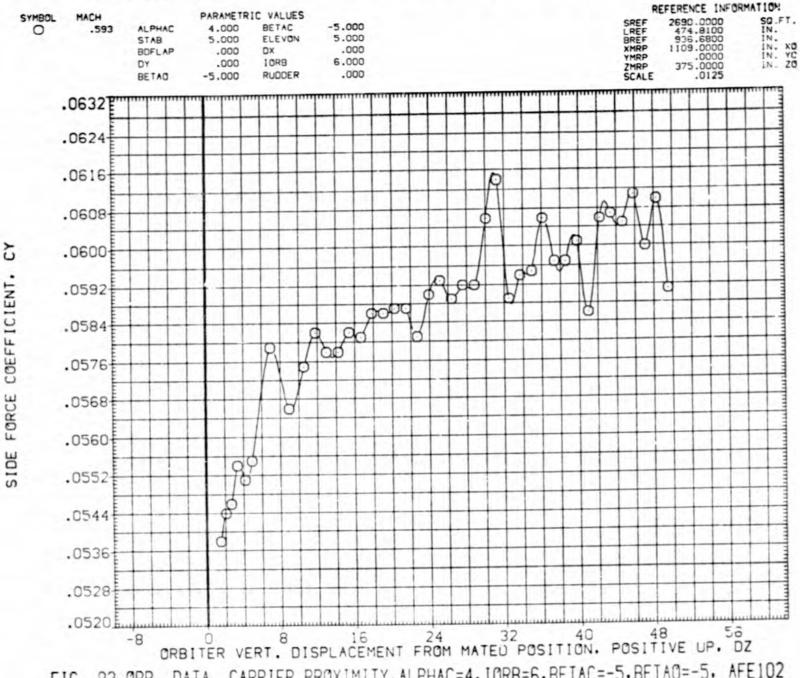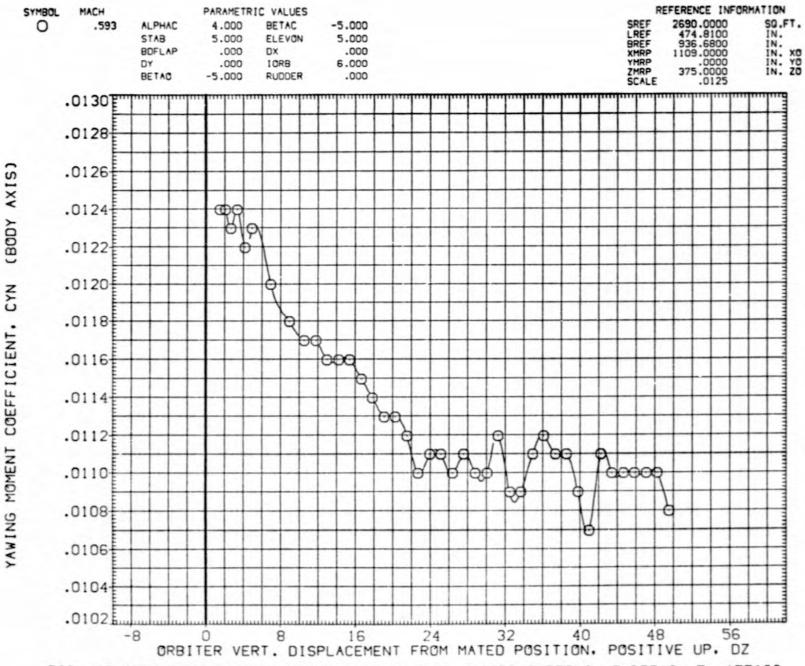
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE100)

FIG. 91 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE100

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE100)

FIG. 91 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE100

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE100)

FIG. 91 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=8, BETAC=0, BETAO=0, AFE100

FIG. 91 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE100
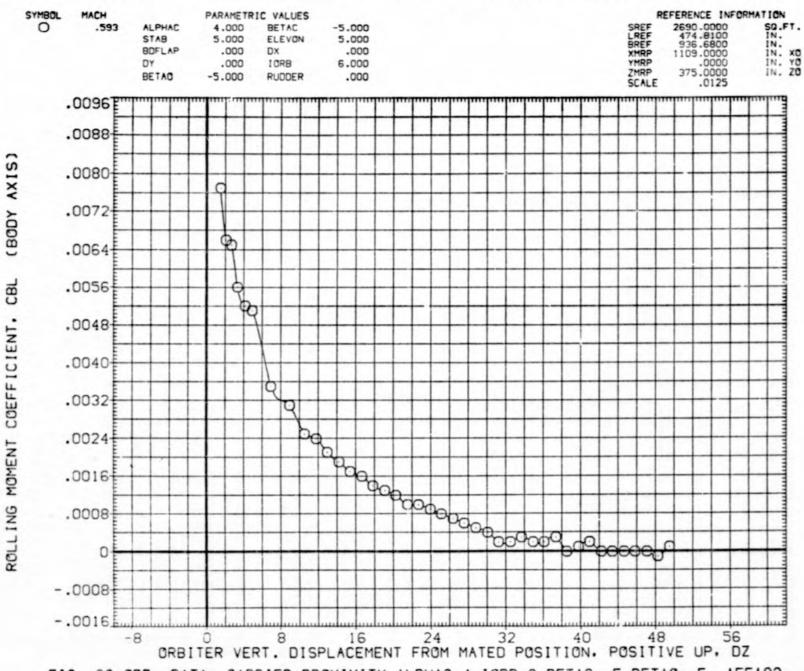
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE100)

SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.597	ALPHAC	4.000	BETAC	.000		SREF	2690.0000	SQ.FT.
		STAB	5.000	ELEVON	.000		LREF	474.8100	IN.
		BDFLAP	.000	DX	.000		BREF	936.6800	IN.
		DY	.000	IORB	8.000		XMRP	1109.0000	IN. XO
		BETAO	.000	RUDDER	.000		YMRP	.0000	IN. YO
							ZMRP	375.0000	IN. ZO
							SCALE	.0125	

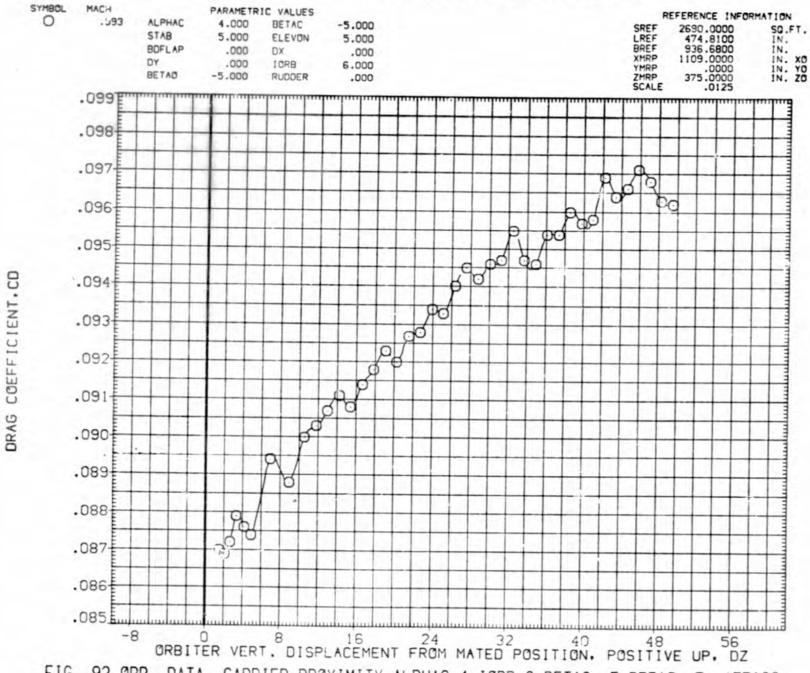FIG. 91 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE100

FIG. 91 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=8, BETAC=0, BETAO=0, AFE100

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE100)

FIG. 91 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE100
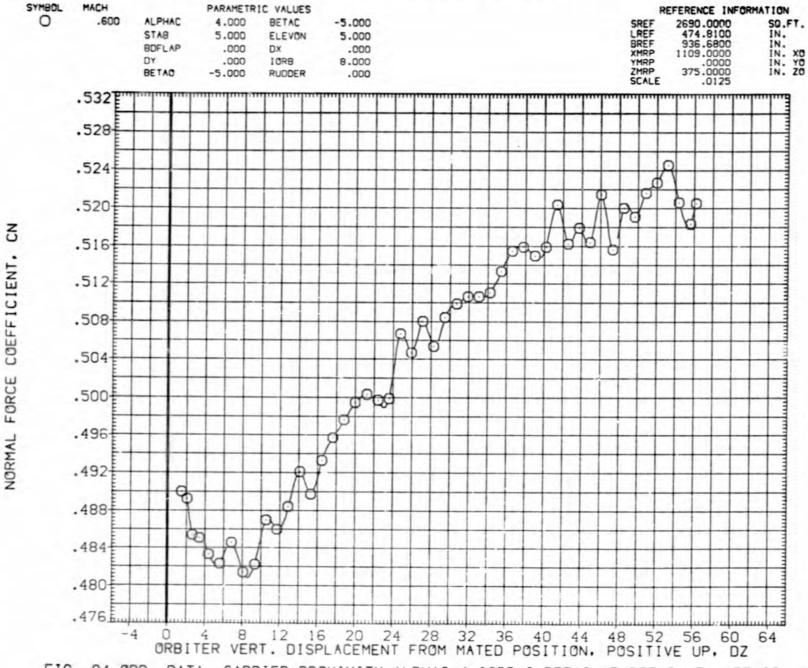
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE100)

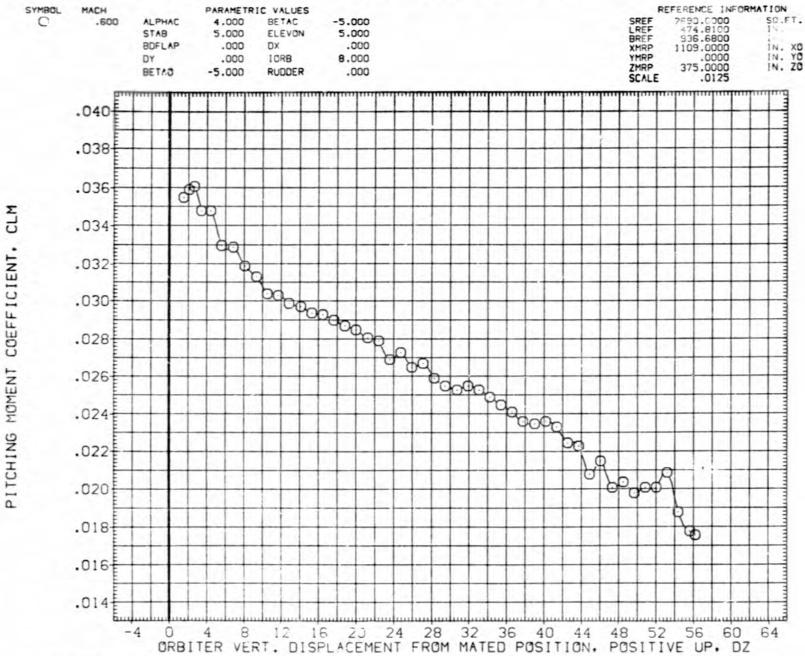FIG. 91 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE100

LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE101)

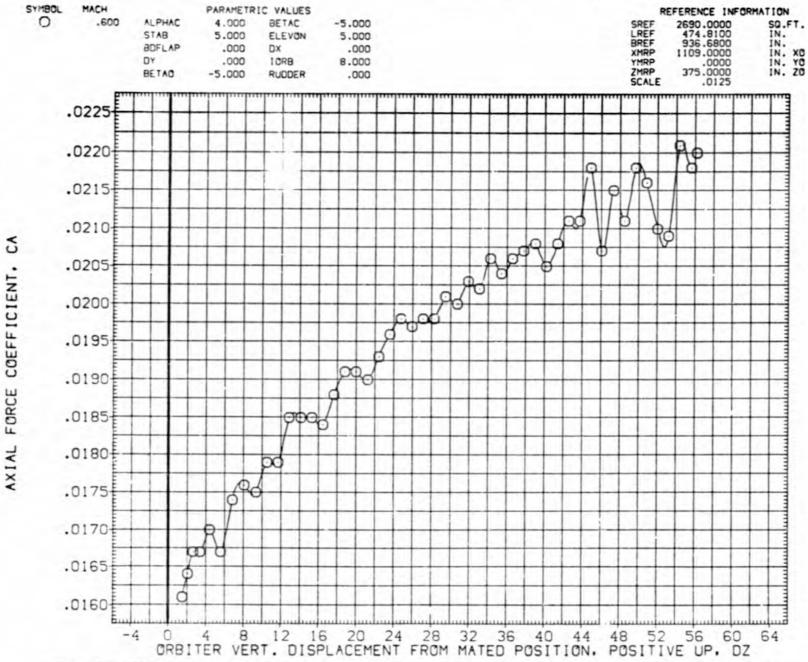FIG. 92 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=-5, BETAO=-5, AFE101

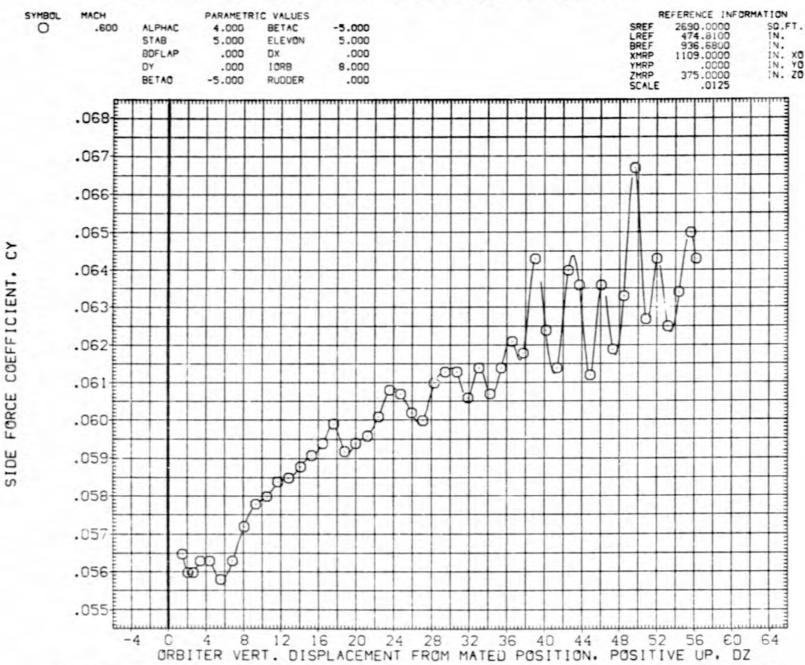| SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION	
○	.593	ALPHAC	4.000	BETAC	-5.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000	LREF	474.8100	IN.
		BDFLAP	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	4.000	XMRP	1109.0000	IN. XO
		BETAO	-5.000	RUDDER	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

FIG. 92 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=4,BETAC=-5,BETAO=-5, AFE101

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE101)

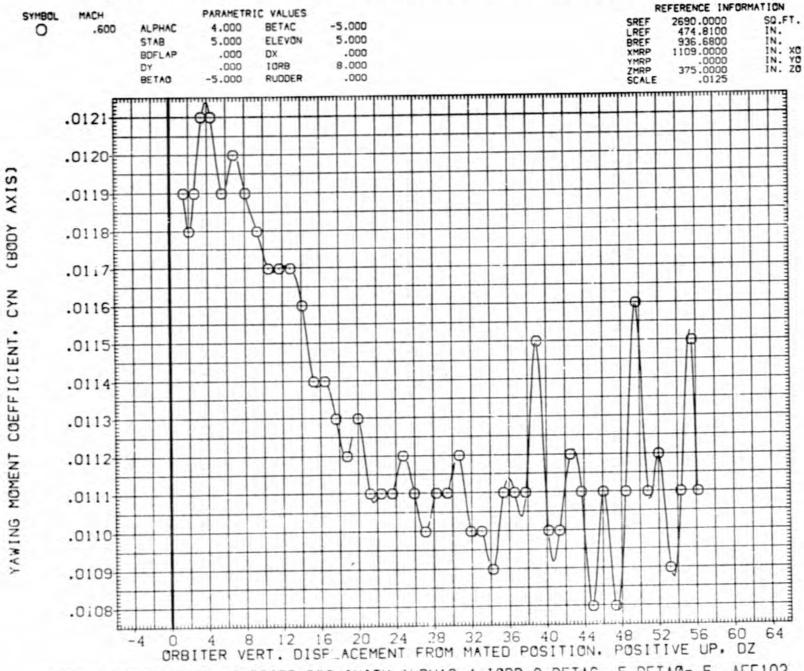| SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.593	ALPHAC	4.000	BETAC	-5.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000	LREF	474.8100	IN.
		BDFLAP	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	4.000	XMRP	1109.0000	IN. XO
		BETAO	-5.000	RUDDER	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

FIG. 92 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=4,BETAC=-5,BETAO=-5, AFE101

LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE101)

FIG. 92 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=4,BETAC=-5,BETAO=-5, AFE101

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LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE101)

FIG. 92 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=4,BETAC=-5,BETAO=-5, AFE101
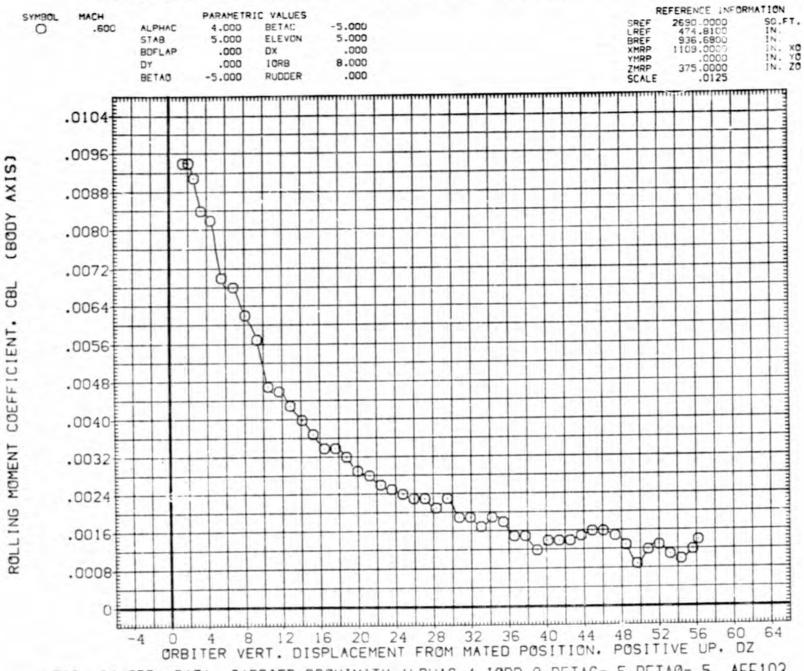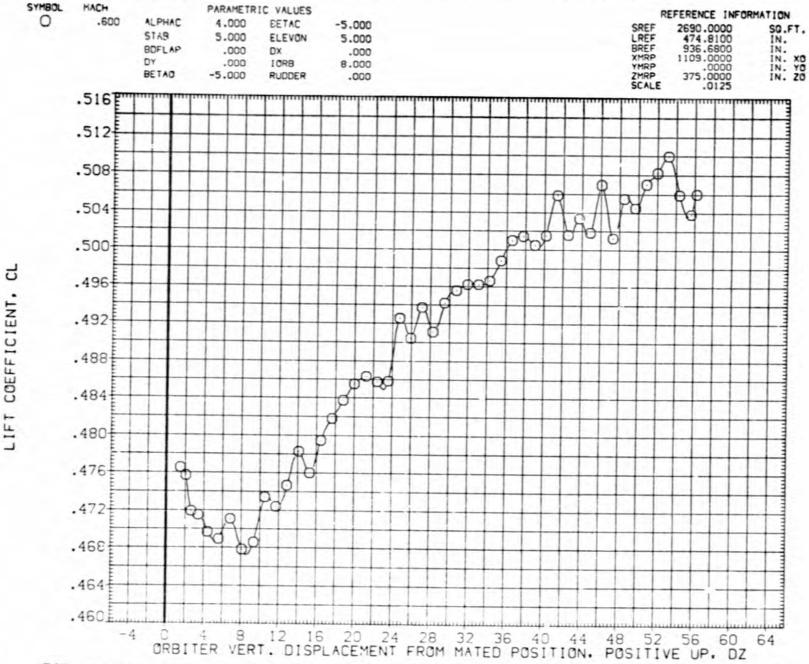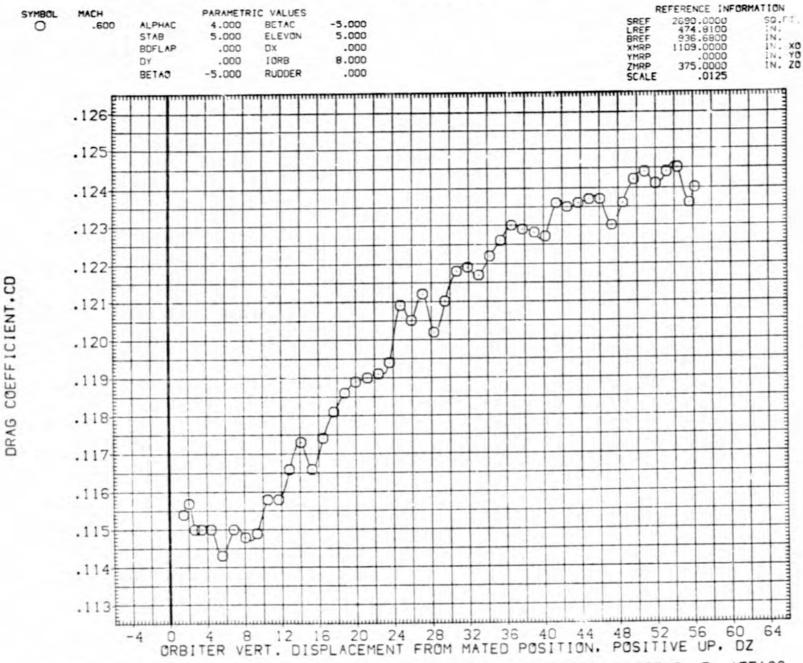
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE101)

FIG. 92 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=-5, BETAO=-5, AFE101

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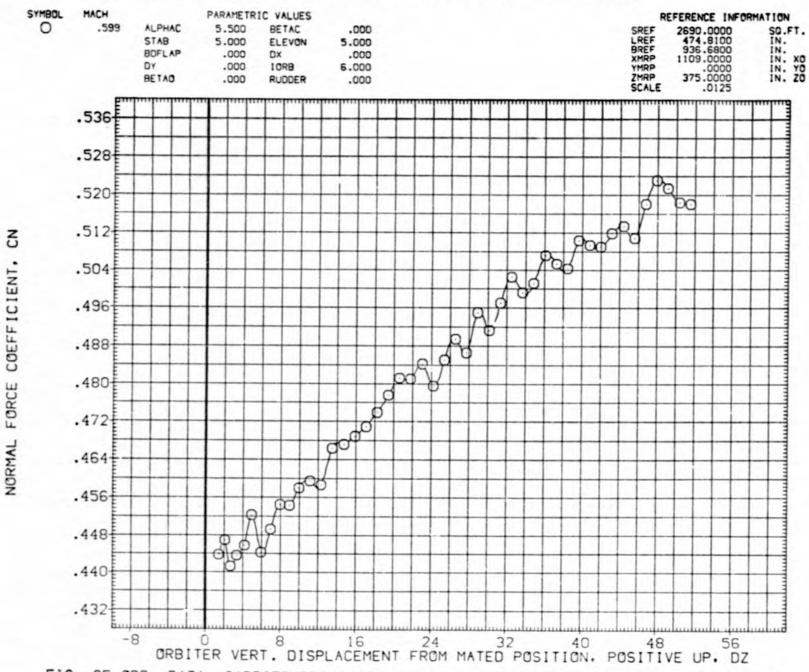
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE101)

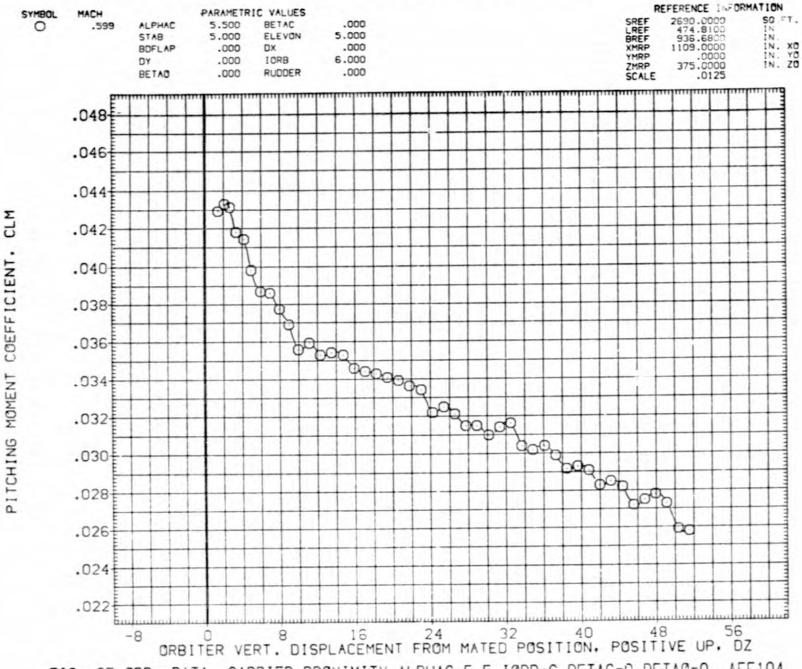FIG. 92 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=-5, BETAO=-5, AFE101

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE101)

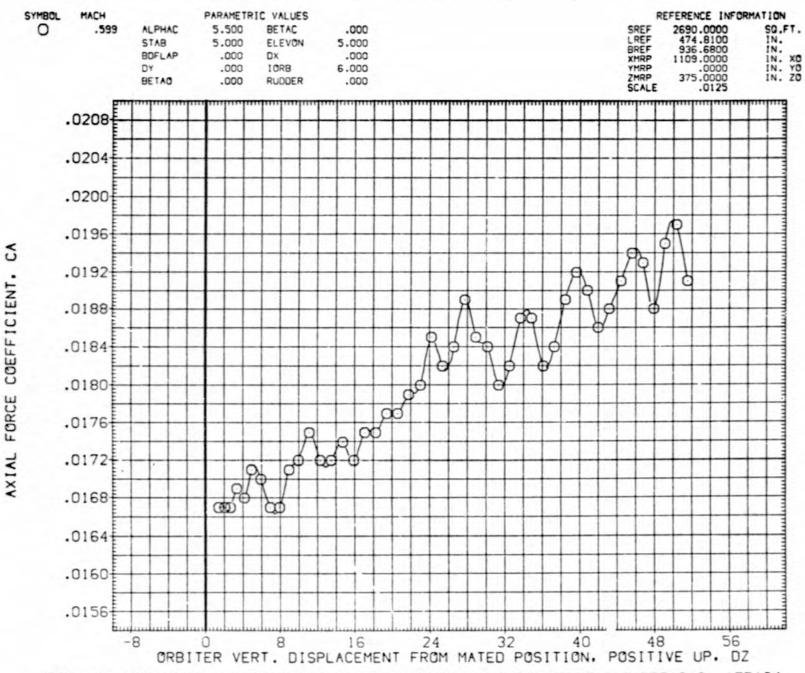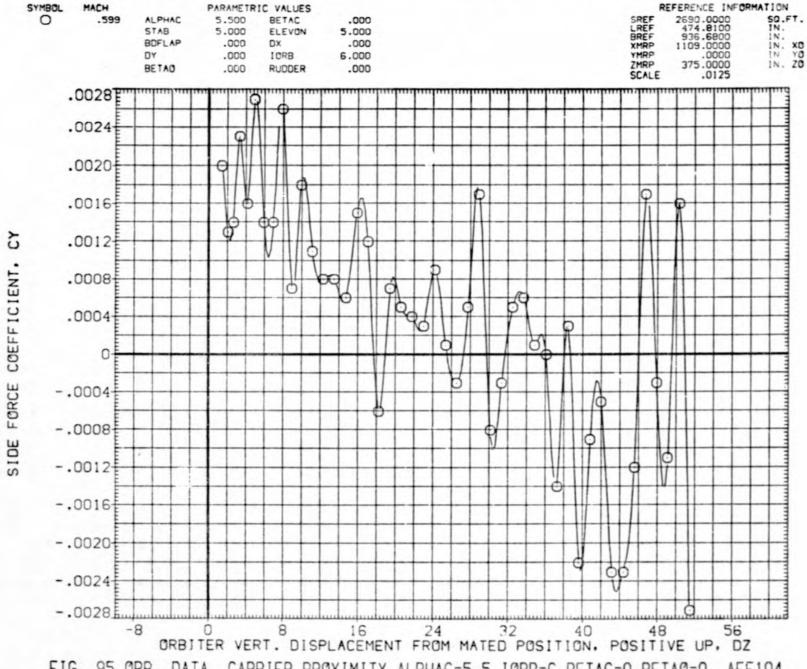| SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.593	ALPHAC	4.000	BETAC	-5.000	SREF	2690.0000	SQ.FT.	
		STAB	5.000	ELEVON	5.000	LREF	474.8100	IN.	
		BDFLAP	.000	DX	.000	BREF	936.6800	IN.	
		DY	.000	IORB	4.000	XMRP	1109.0000	IN. XO	
		BETAO	-5.000	RUDDER	.000	YMRP	.0000	IN. YO	
						ZMRP	375.0000	IN. ZO	
						SCALE	.0125		

FIG. 92 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=-5, BETAO=-5, AFE101

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE102)

FIG. 93 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=-5,BETAO=-5, AFE102
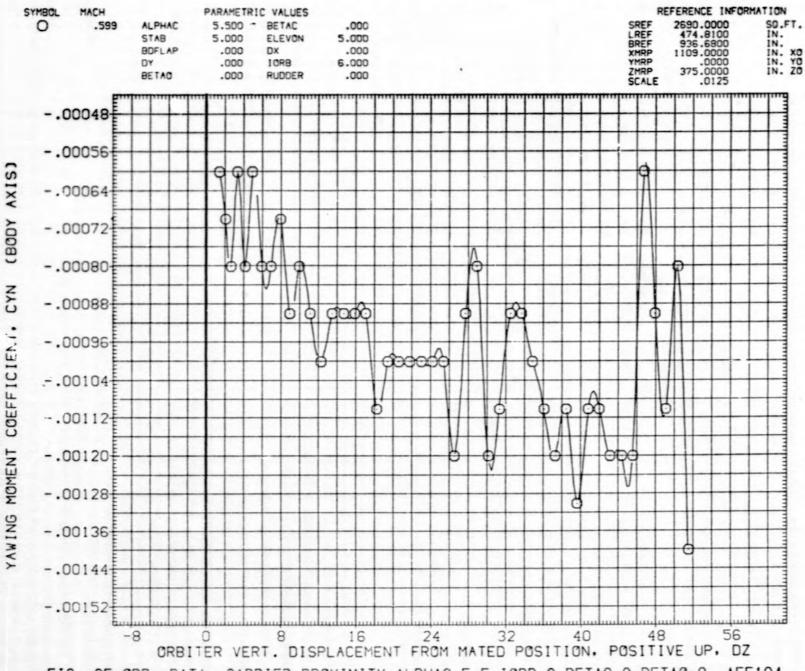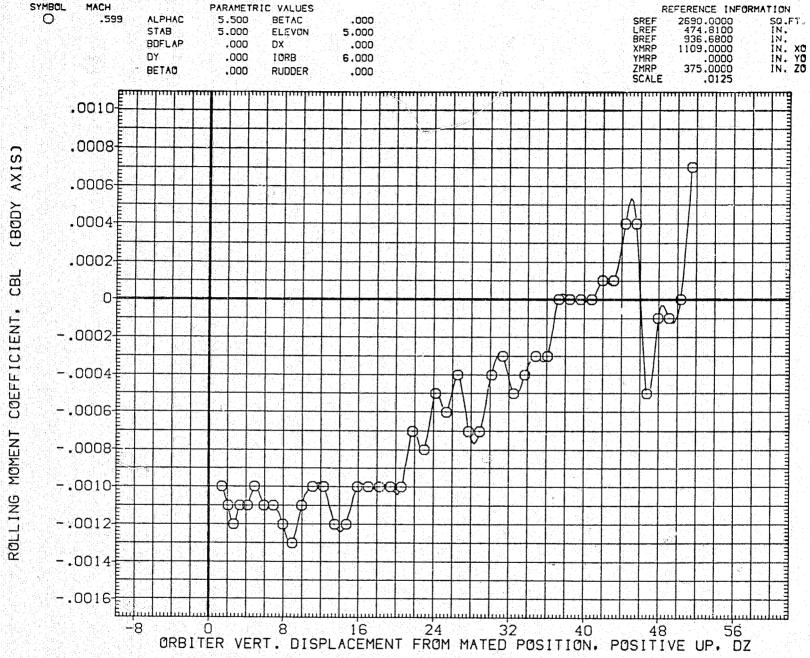
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE102)

FIG. 93 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=6, BETAC=-5, BETAO=-5, AFE102

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LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE102)

FIG. 93 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=6, BETAC=-5, BETAO=-5, AFE102
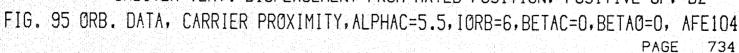
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE102)

FIG. 93 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=-5,BETAO=-5, AFE102

LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE102)

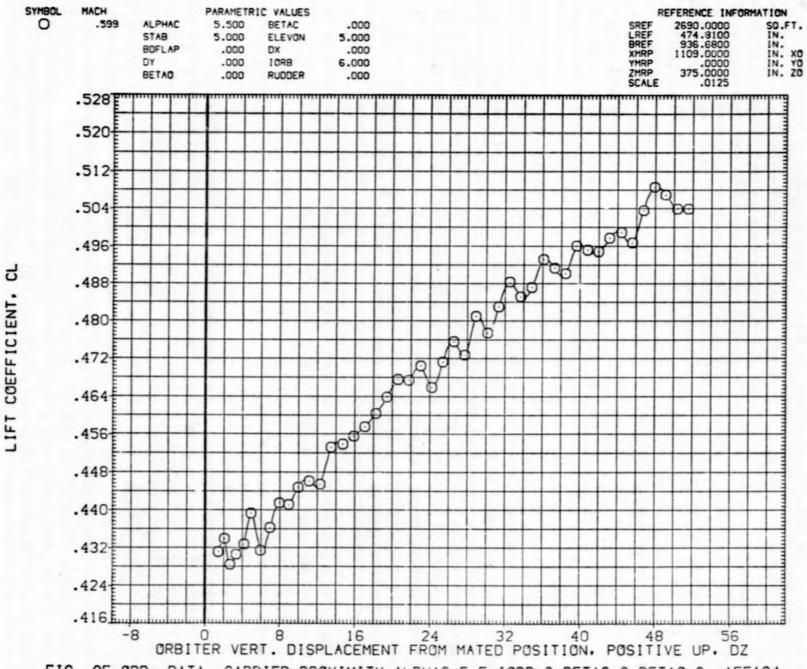FIG. 93 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=-5,BETAO=-5, AFE102

FIG. 93 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=6, BETAC=-5, BETAO=-5, AFE102

LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE102)

FIG. 93 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=-5,BETAO=-5, AFE102

FIG. 93 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=6, BETAC=-5, BETAO=-5, AFE102
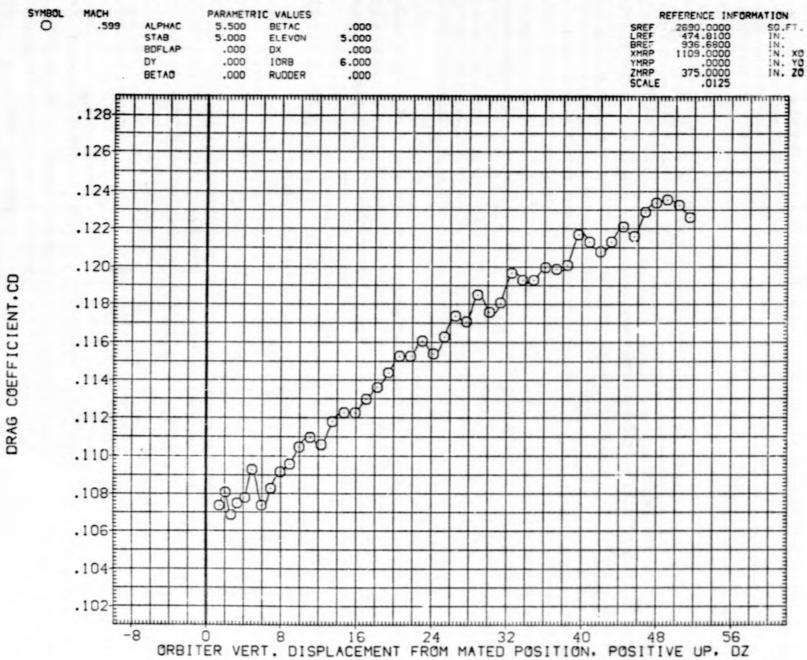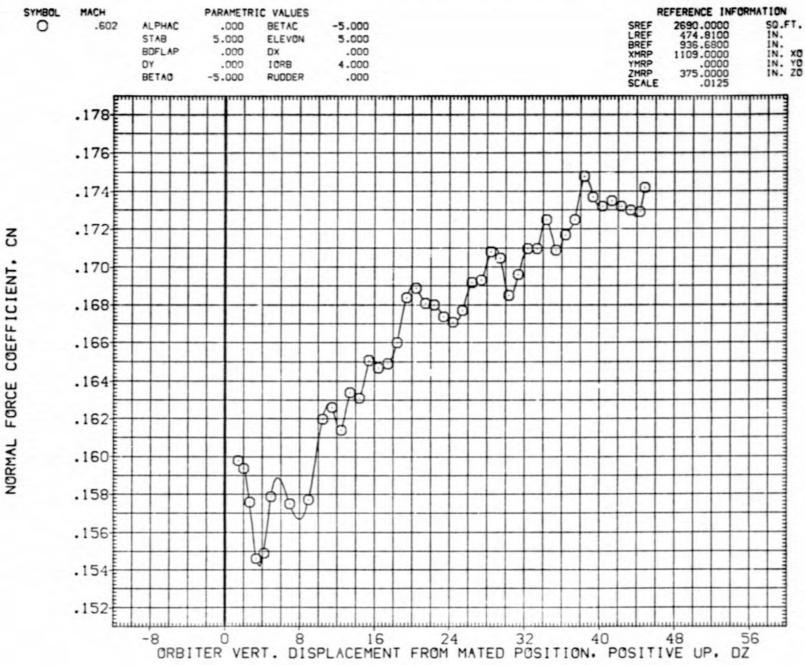
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE103)

FIG. 94 ORB. DATA, CARRIER PROXIMITY.ALPHAC=4.IORB=8,BETAC=-5,BETAO=-5, AFE103

FIG. 94 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=8, BETAC=-5, BETAO=-5, AFE103

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE103)

FIG. 94 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=-5,BETAO=-5, AFE103
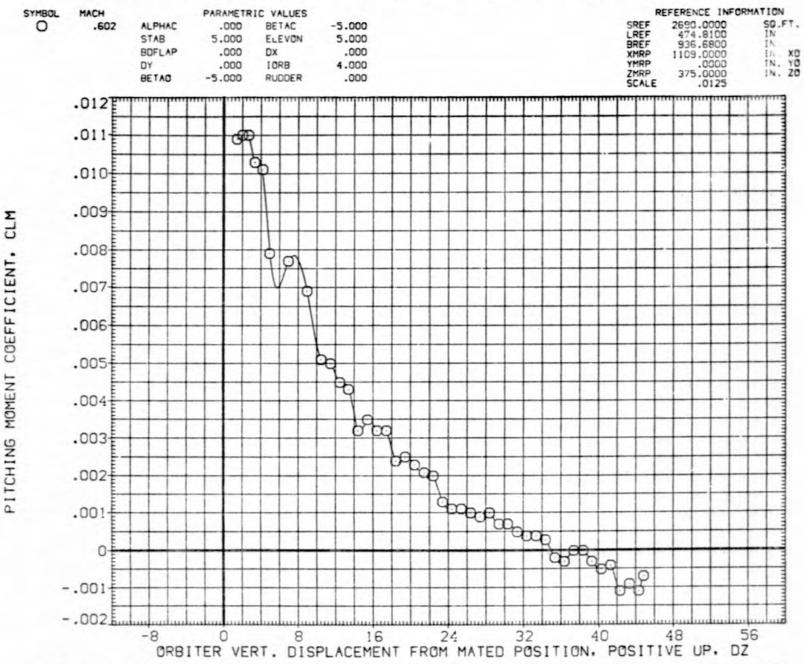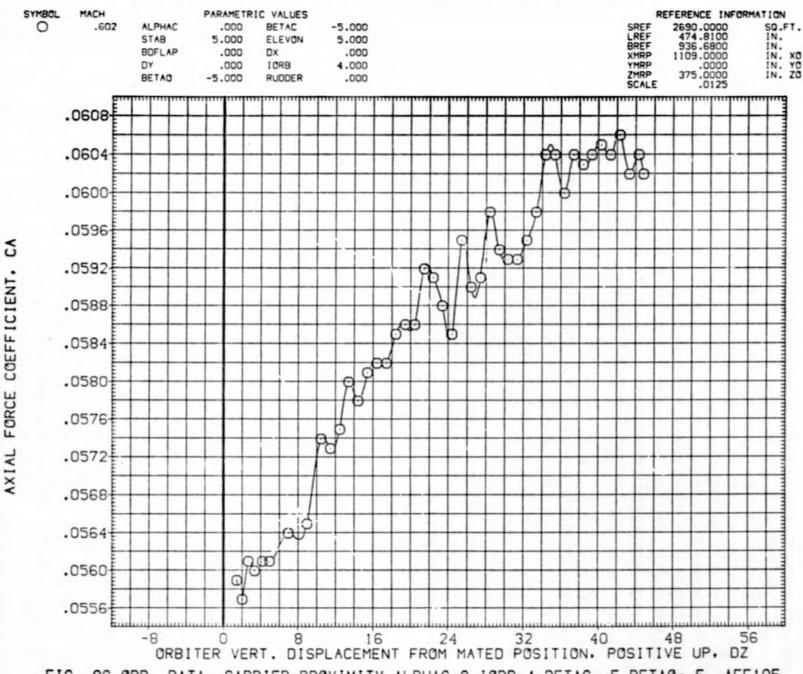
LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE103)

FIG. 94 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=-5,BETAO=-5, AFE103

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LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE103)

FIG. 94 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=-5,BETAO=-5, AFE103

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE103)

FIG. 94 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=8, BETAC=-5, BETAO=-5, AFE103

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE103)

FIG. 94 ORB. DATA, CARRIER PROXIMITY.ALPHAC=4,IORB=8,BETAC=-5,BETAO=-5, AFE103

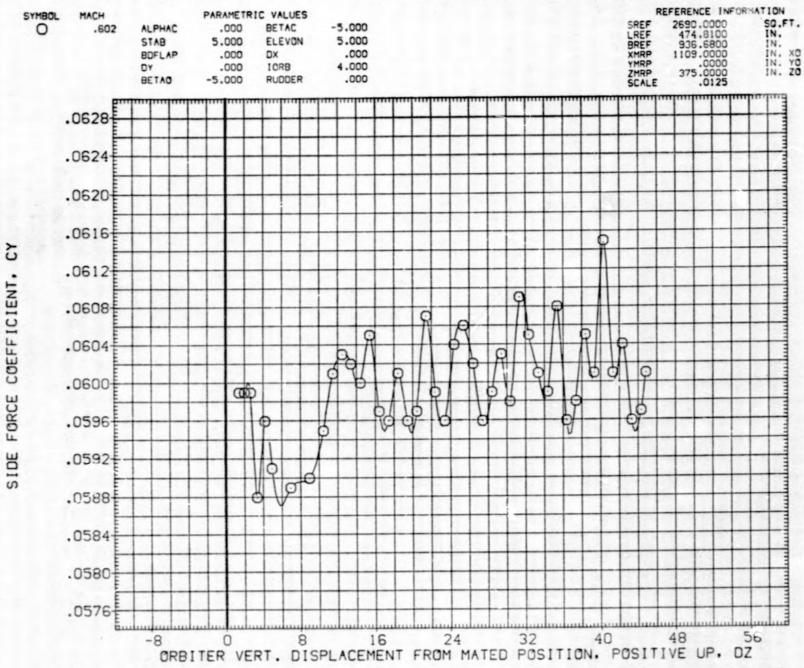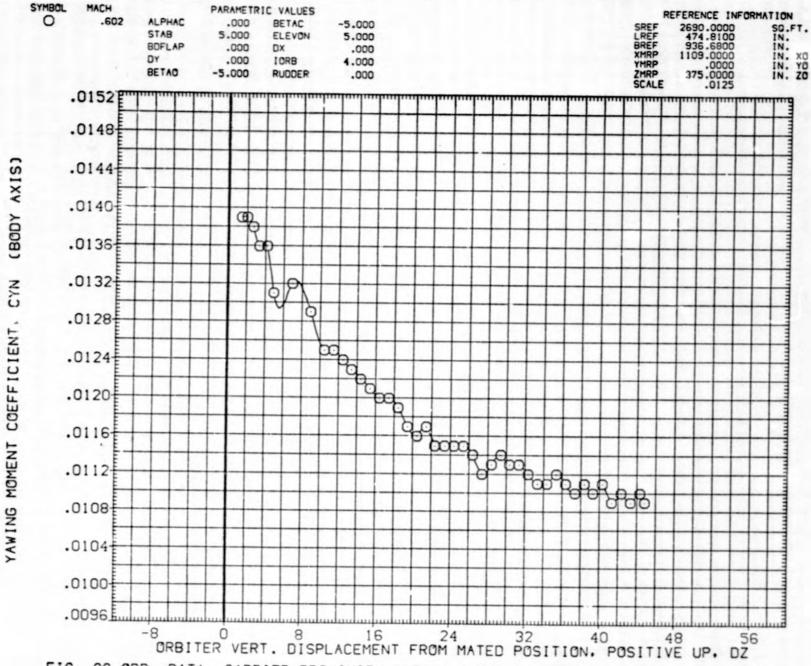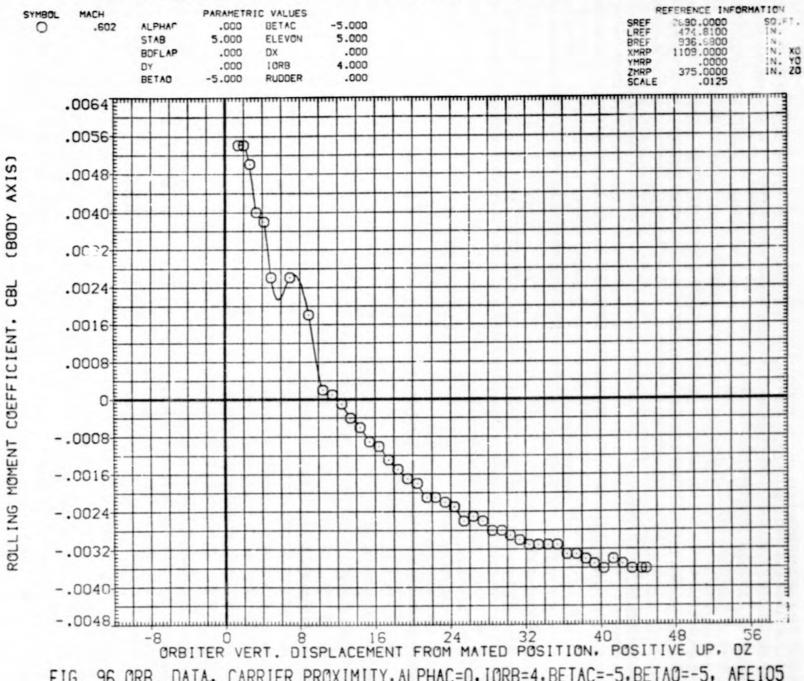| SYMBOL	MACH	PARAMETRIC VALUES			
O	.600	ALPHAC	4.000	BETAC	-5.000
		STAB	5.000	ELEVON	5.000
		BDFLAP	.000	DX	.000
		DY	.000	IORB	8.000
		BETAO	-5.000	RUDDER	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

FIG. 94 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=-5,BETAO=-5, AFE103
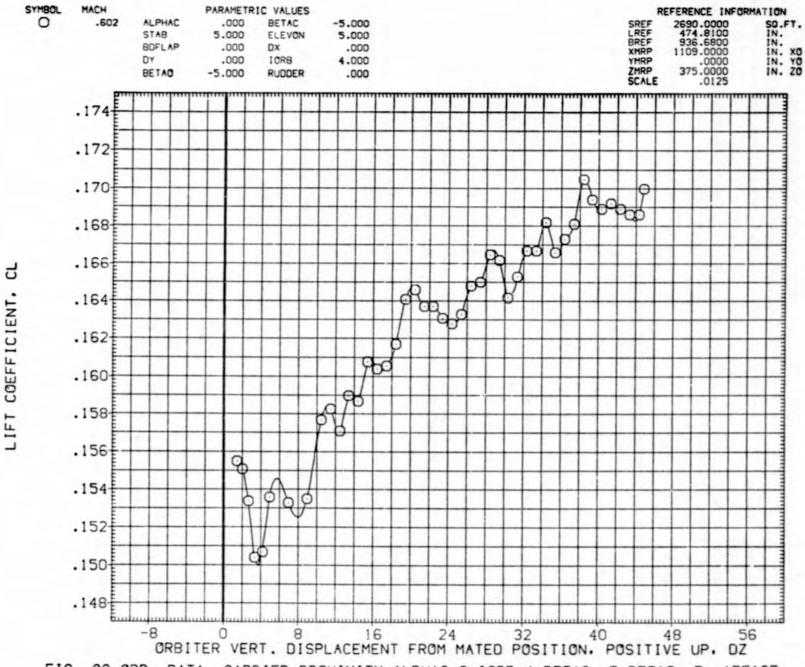
LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE104)

FIG. 95 ORB. DATA, CARRIER PROXIMITY,ALPHAC=5.5,IORB=6,BETAC=0,BETAO=0, AFE104

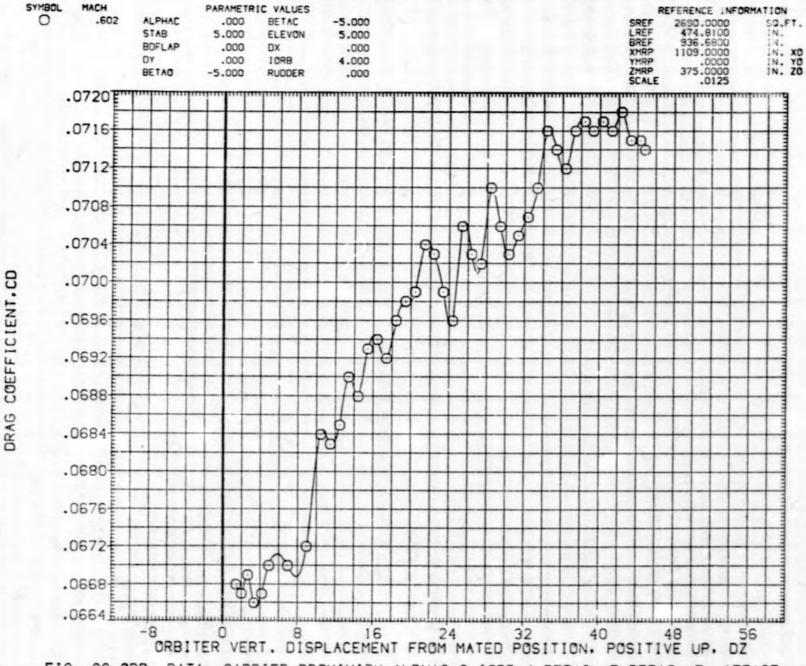# LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE104)

SYMBOL	MACH	PARAMETRIC VALUES			
○	.599	ALPHAC	5.500	BETAC	.000
		STAB	5.000	ELEVON	5.000
		BDFLAP	.000	DX	.000
		DY	.000	IORB	6.000
		BETAO	.000	RUDDER	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

FIG. 95 ORB. DATA, CARRIER PROXIMITY.ALPHAC=5.5,IORB=6,BETAC=0,BETAO=0, AFE104

LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE104)

FIG. 95 ORB. DATA, CARRIER PROXIMITY,ALPHAC=5.5,IORB=6,BETAC=O,BETAO=O, AFE104

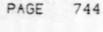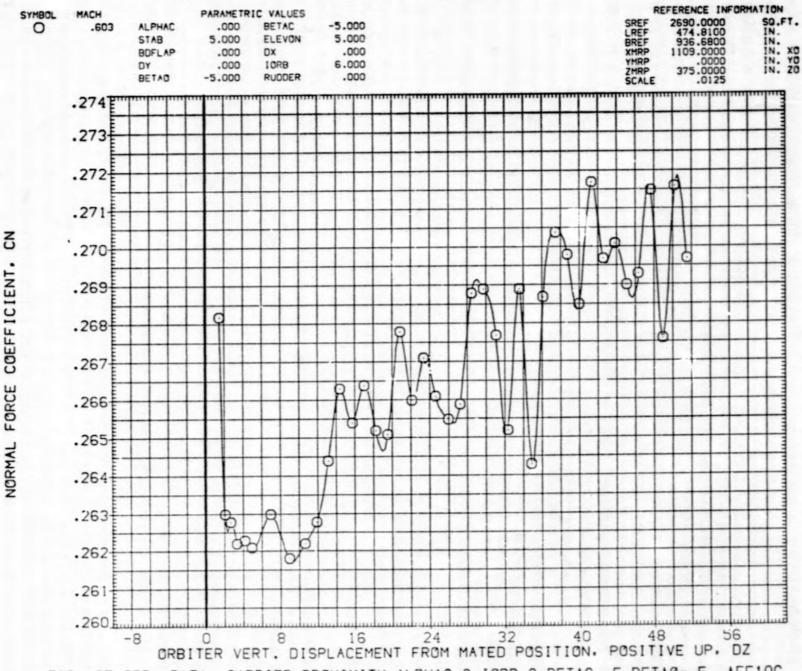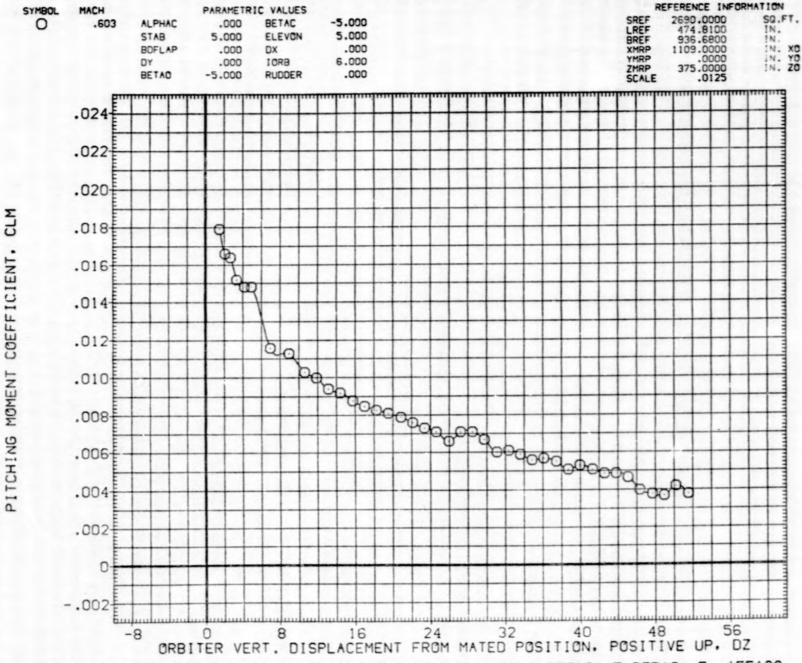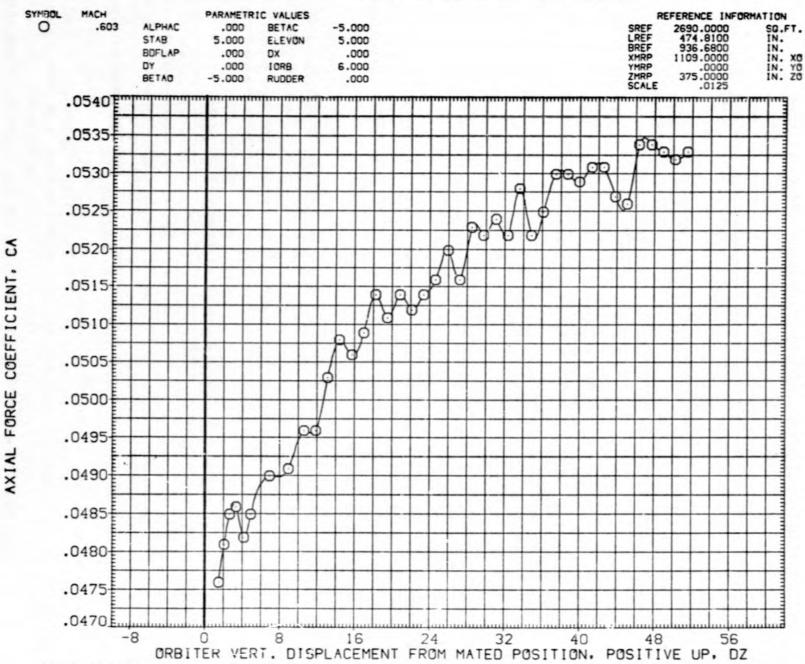# LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE104)

FIG. 95 ORB. DATA, CARRIER PROXIMITY,ALPHAC=5.5,IORB=6,BETAC=0,BETAO=0, AFE104

FIG. 95 ORB. DATA, CARRIER PROXIMITY, ALPHAC=5.5, IORB=6, BETAC=0, BETAO=0, AFE104
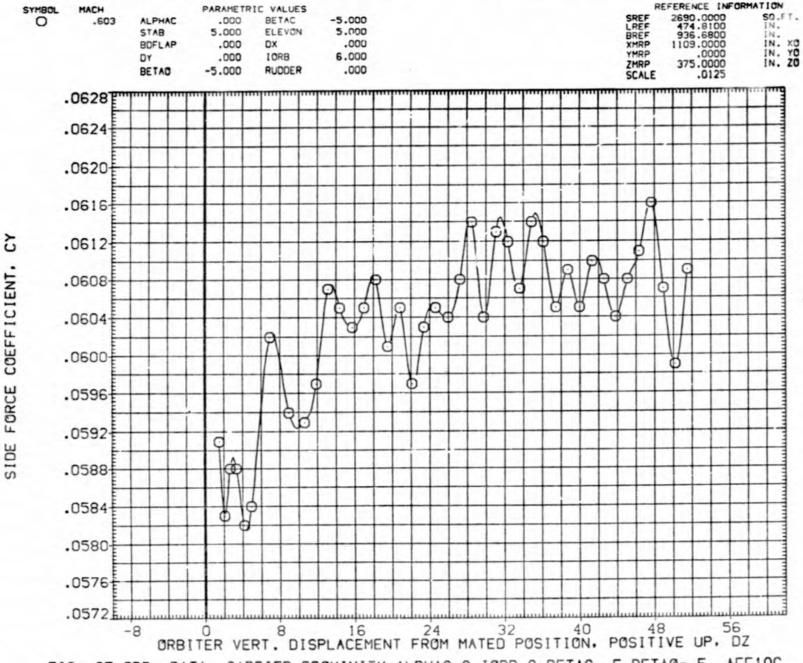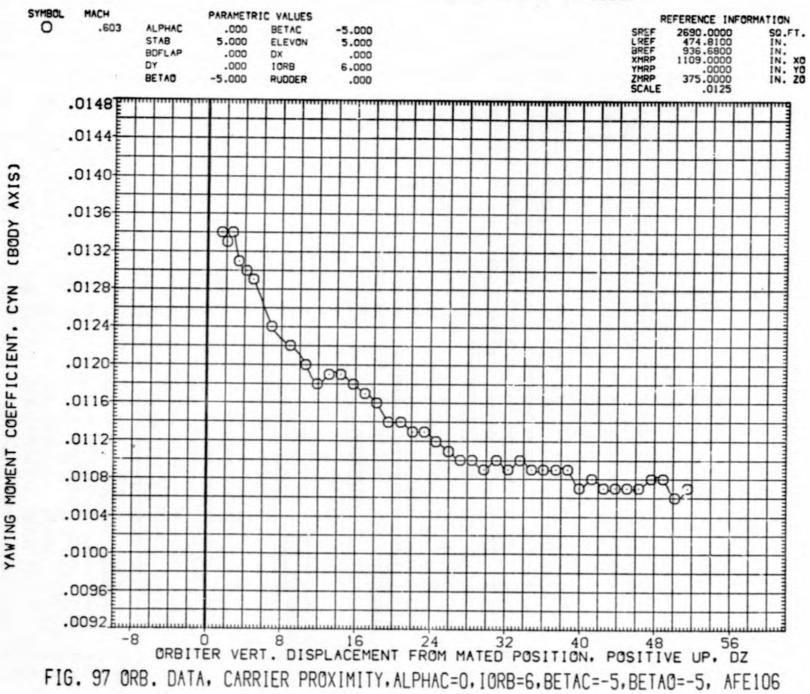
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE104)

FIG. 95 ORB. DATA, CARRIER PROXIMITY,ALPHAC=5.5,IORB=6,BETAC=0,BETAO=0, AFE104

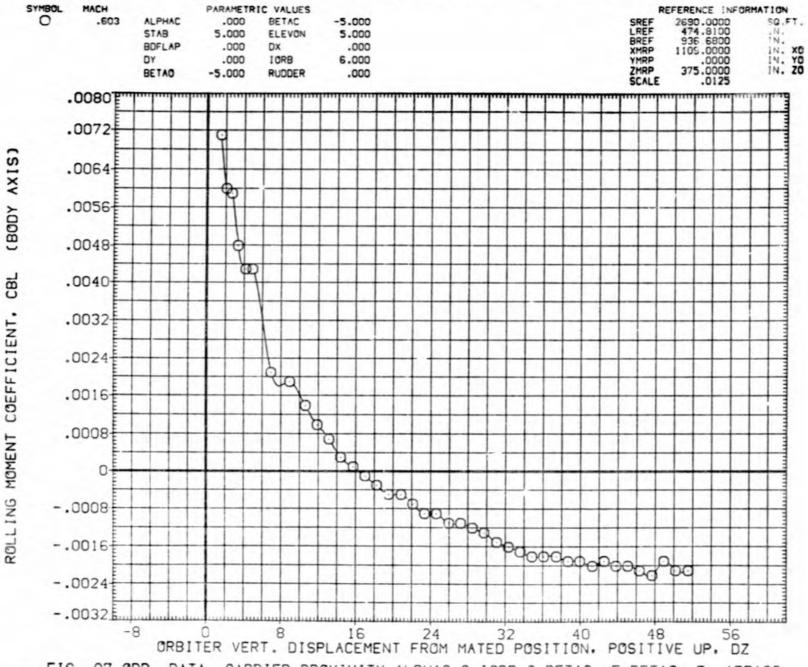PAGE   734

SYMBOL   MACH
O   .599

PARAMETRIC VALUES

ALPHAC	5.500	BETAC	.000
STAB	5.000	ELEVON	5.000
BDFLAP	.000	DX	.000
DY	.000	IORB	6.000
BETAO	.000	RUDDER	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

LIFT COEFFICIENT. CL

Y-axis values: .528 .520 .512 .504 .496 .488 .480 .472 .464 .456 .448 .440 .432 .424 .416

X-axis values: -8 0 8 16 24 32 40 48 56

ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ
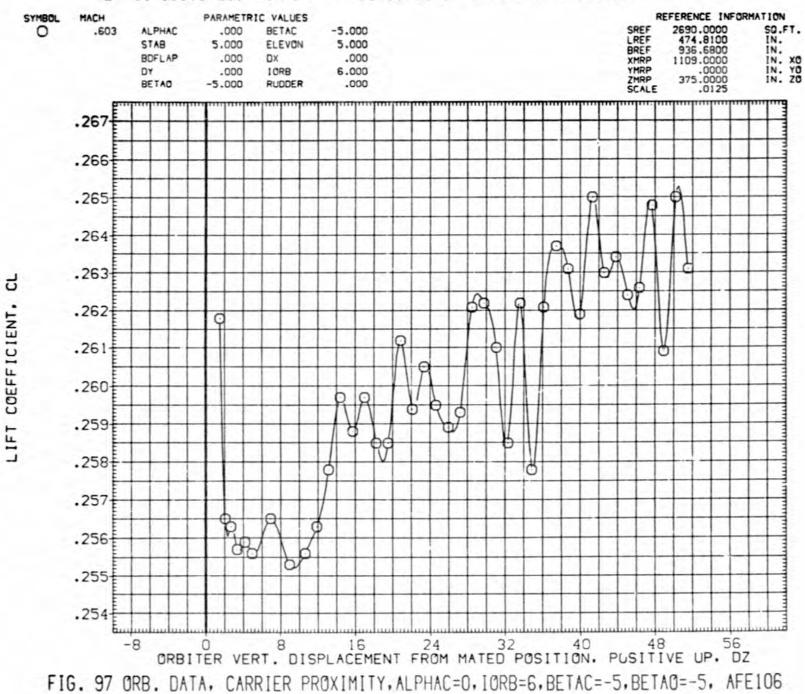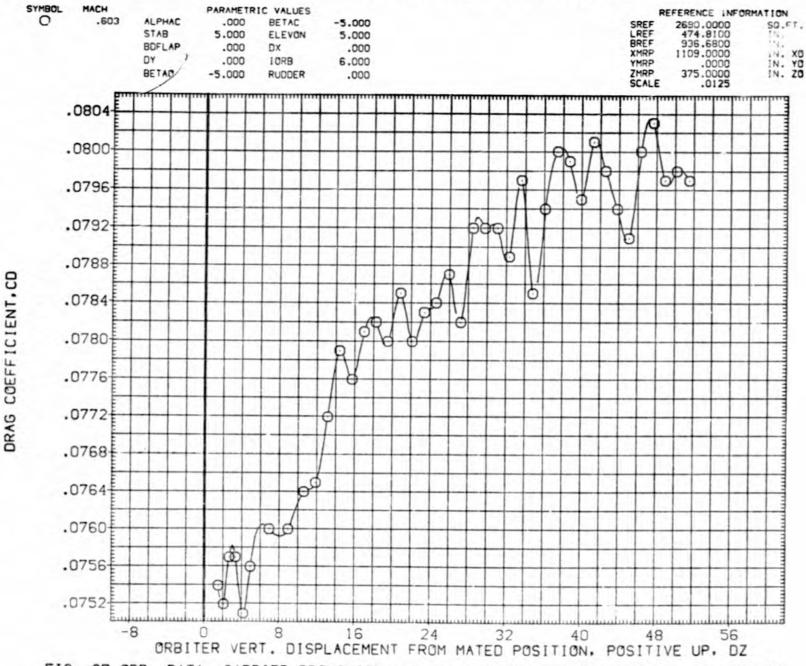
FIG. 95 ORB. DATA, CARRIER PROXIMITY,ALPHAC=5.5,IORB=6,BETAC=0,BETAO=0, AFE104

LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE104)

FIG. 95 ORB. DATA, CARRIER PROXIMITY,ALPHAC=5.5,IORB=6,BETAC=O,BETAO=O, AFE104

LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE105)

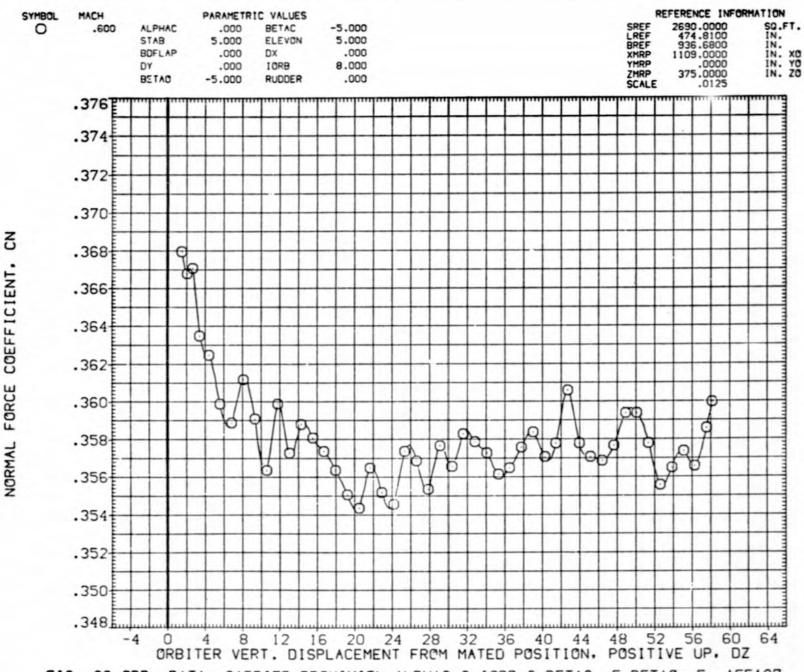| SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.602	ALPHAC	.000	BETAC	-5.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000	LREF	474.8100	IN.
		BDFLAP	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	4.000	XMRP	1109.0000	IN. XO
		BETAO	-5.000	RUDDER	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

FIG. 96 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=4,BETAC=-5,BETAO=-5, AFE105

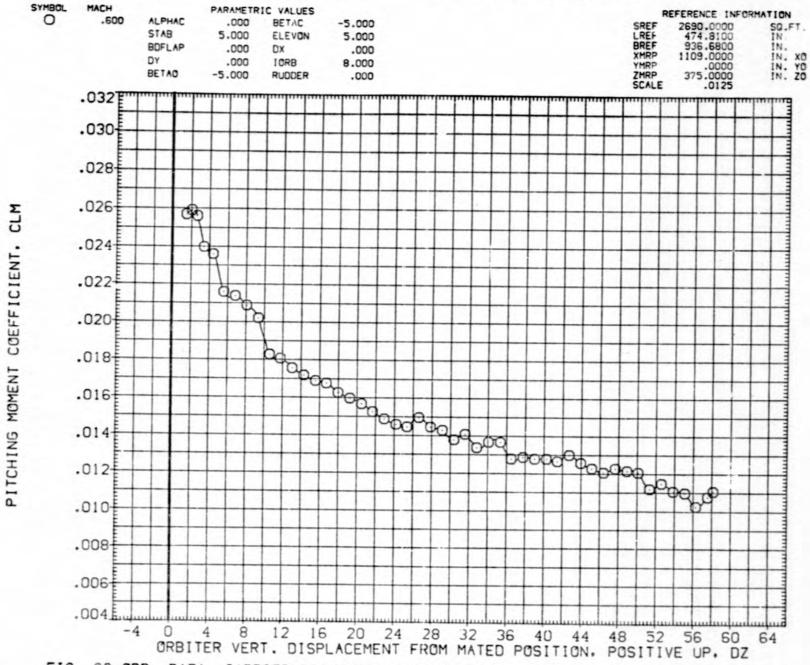LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE105)

FIG. 96 ORB. DATA, CARRIER PROXIMITY, ALPHAC=0, IORB=4, BETAC=-5, BETAO=-5, AFE105

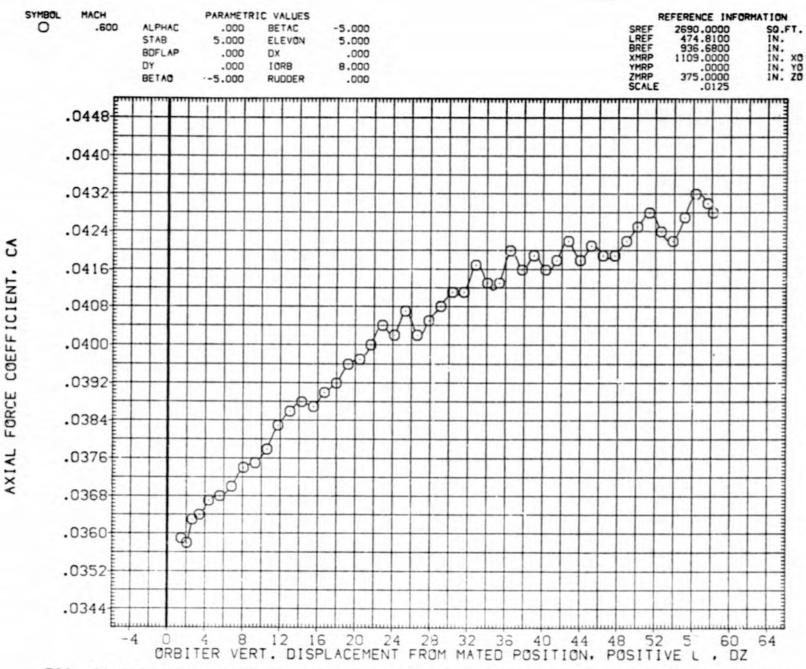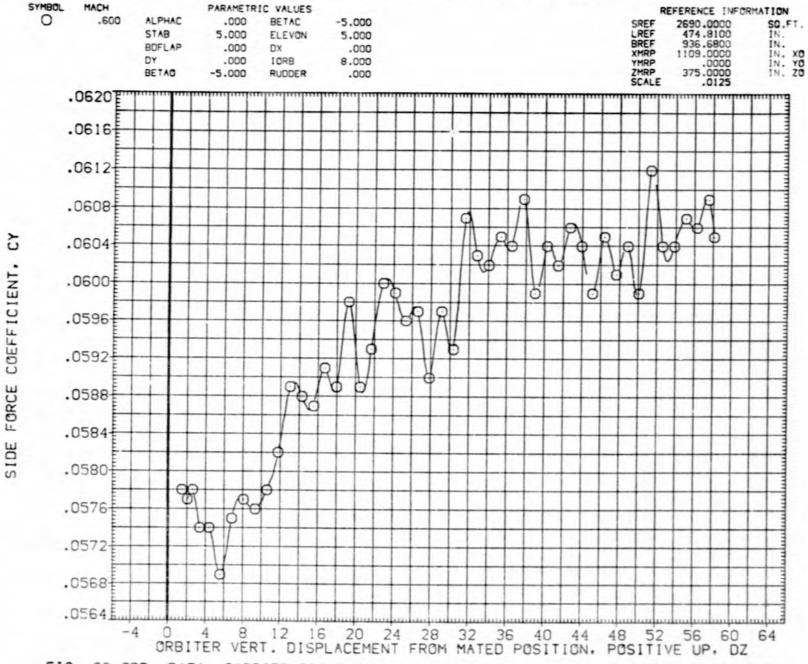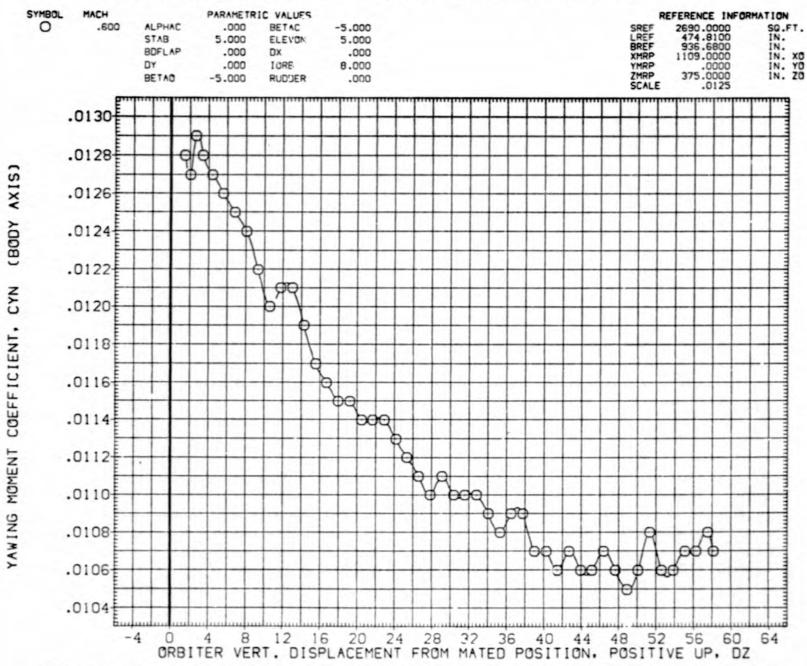LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE105)

FIG. 96 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=4,BETAC=-5,BETAO=-5, AFE105

FIG. 96 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=4,BETAC=-5,BETAO=-5, AFE105

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE105)

FIG. 96 ORB. DATA, CARRIER PROXIMITY, ALPHAC=0, IORB=4, BETAC=-5, BETAO=-5, AFE105

FIG. 96 ORB. DATA, CARRIER PROXIMITY, ALPHAC=0, IORB=4, BETAC=-5, BETAO=-5, AFE105

LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE105)

FIG. 96 ORB. DATA, CARRIER PROXIMITY, ALPHAC=0, IORB=4, BETAC=-5, BETAO=-5, AFE105
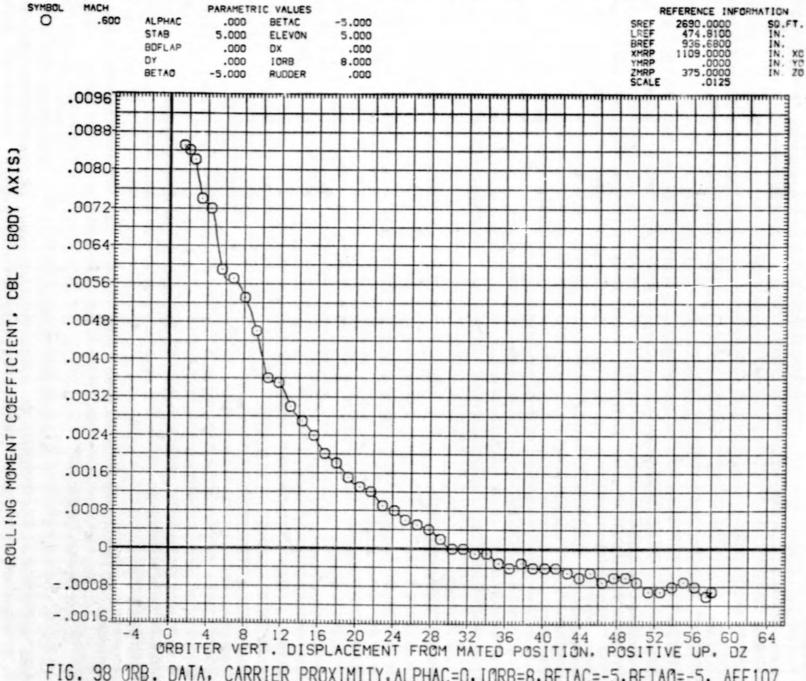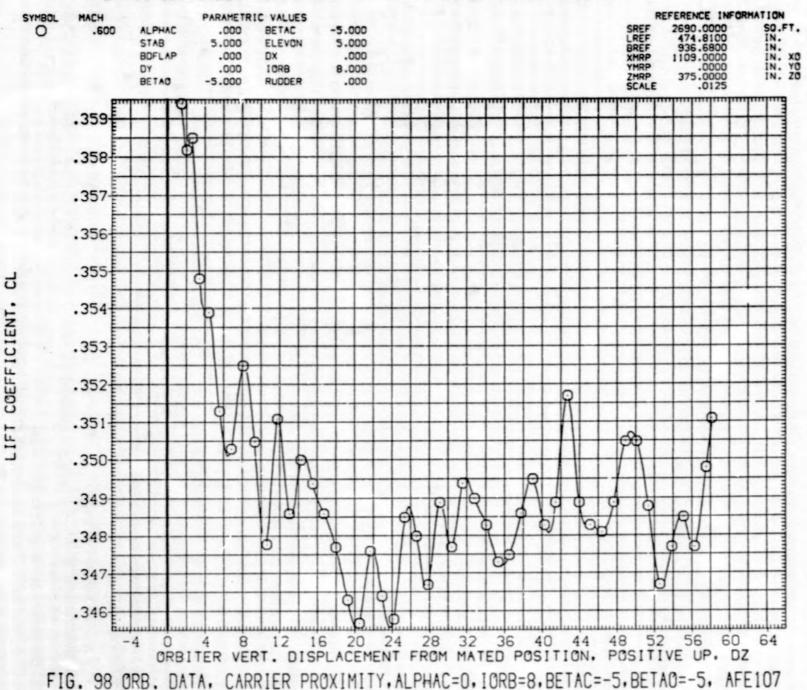
LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE105)
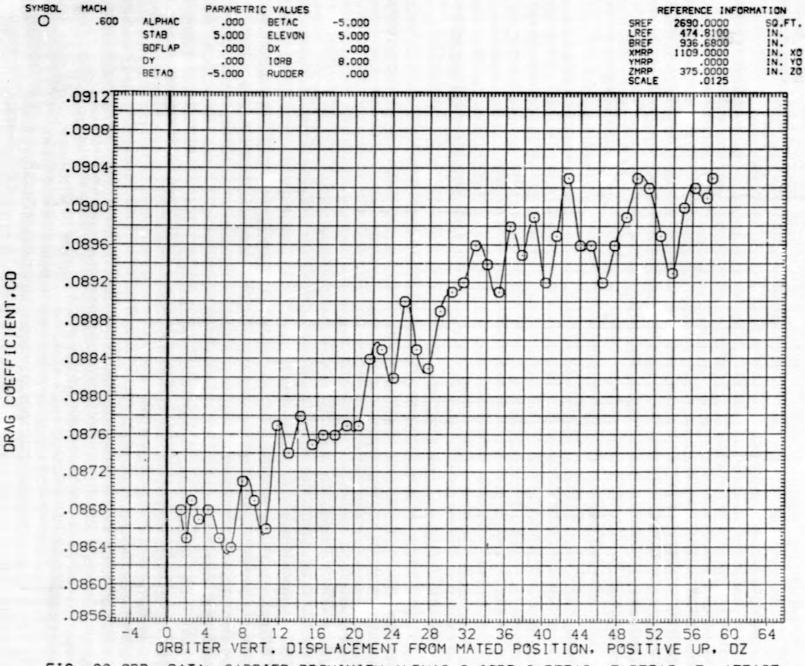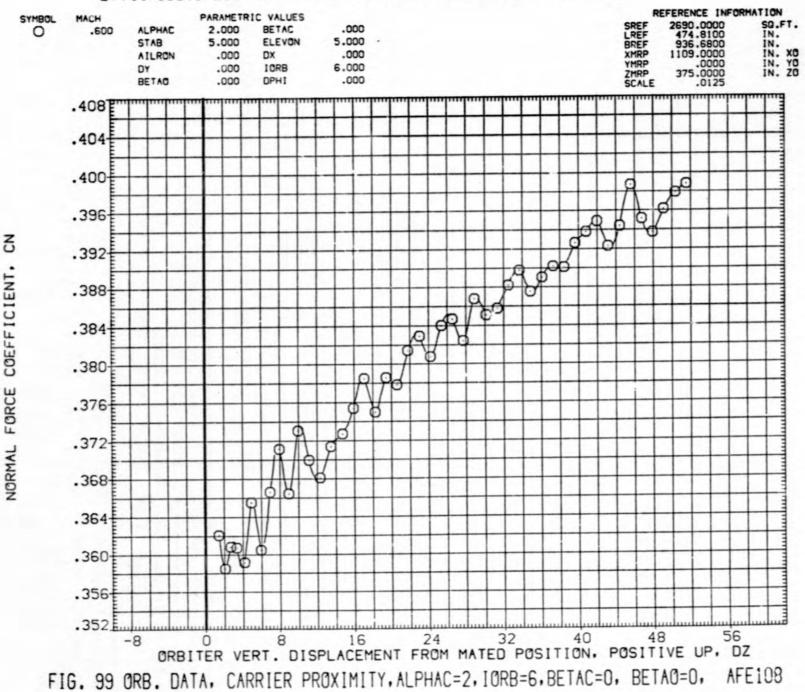
FIG. 96 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=4,BETAC=-5,BETAO=-5, AFE105

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LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE106)

SYMBOL   MACH   PARAMETRIC VALUES
  O   .603   ALPHAC   .000   BETAC   -5.000
                     STAB   5.000   ELEVON   5.000
                     BDFLAP   .000   DX   .000
                     DY   .000   IORB   6.000
                     BETAO   -5.000   RUDDER   .000

REFERENCE INFORMATION
SREF   2690.0000   SQ.FT.
LREF   474.8100   IN.
BREF   936.6800   IN.
XMRP   1109.0000   IN. XO
YMRP   .0000   IN. YO
ZMRP   375.0000   IN. ZO
SCALE   .0125

FIG. 97 ORB. DATA, CARRIER PROXIMITY, ALPHAC=0, IORB=6, BETAC=-5, BETAO=-5, AFE106

SYMBOL	MACH	PARAMETRIC VALUES			
O	.603	ALPHAC	.000	BETAC	-5.000
		STAB	5.000	ELEVON	5.000
		BDFLAP	.000	DX	.000
		DY	.000	IORB	6.000
		BETAO	-5.000	RUDDER	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

PITCHING MOMENT COEFFICIENT, CLM

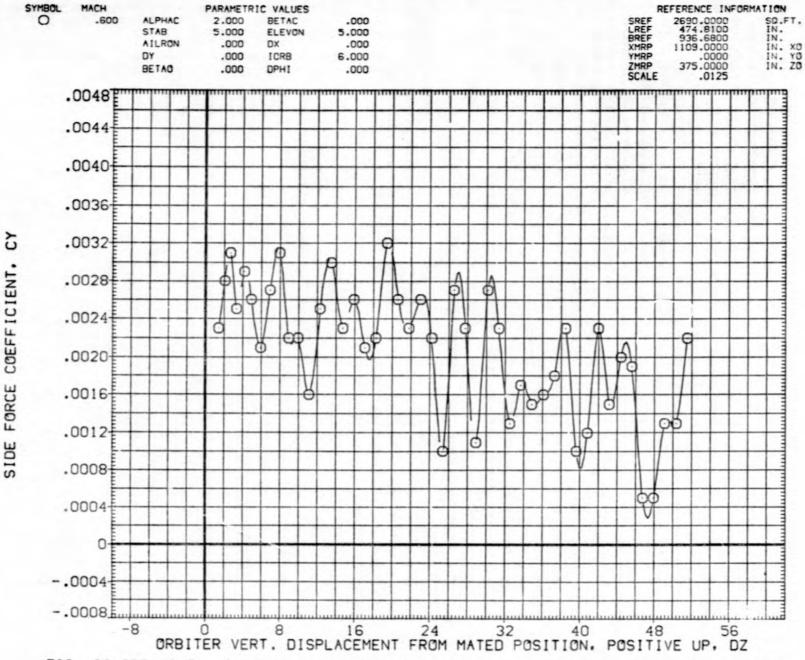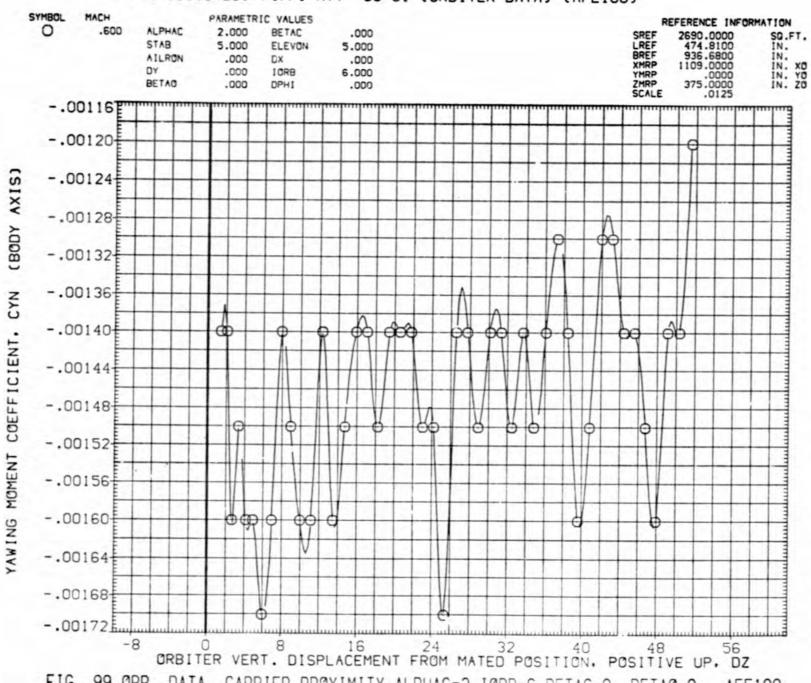ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG. 97 ORB. DATA, CARRIER PROXIMITY, ALPHAC=0, IORB=6, BETAC=-5, BETAO=-5, AFE106
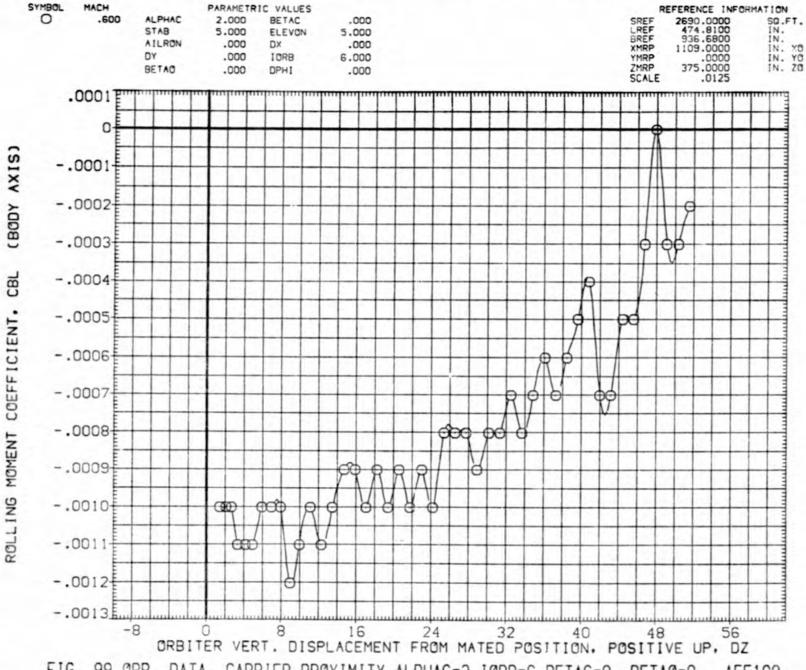
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE106)

FIG. 97 ORB. DATA, CARRIER PROXIMITY, ALPHAC=0, IORB=6, BETAC=-5, BETAO=-5, AFE106

FIG. 97 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=6,BETAC=-5,BETA0=-5, AFE106
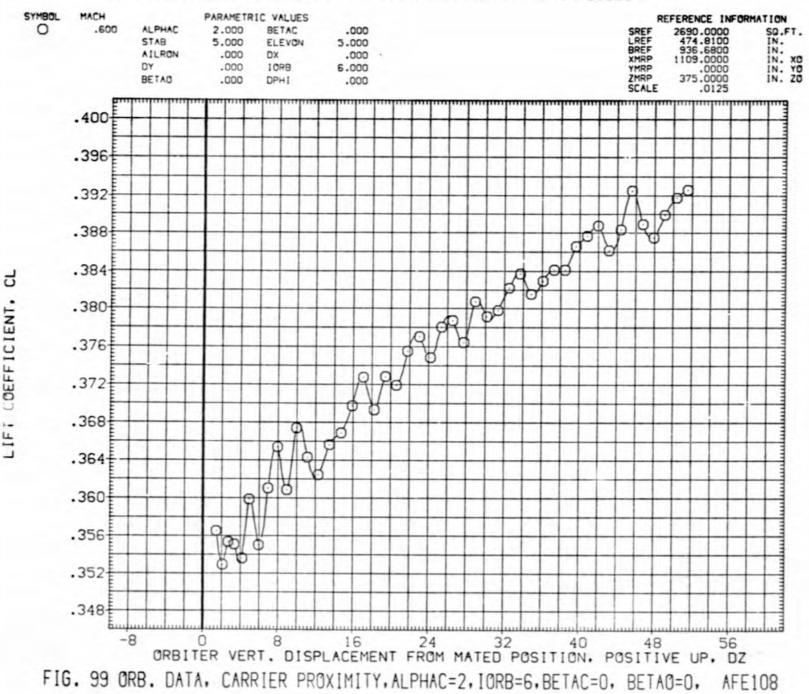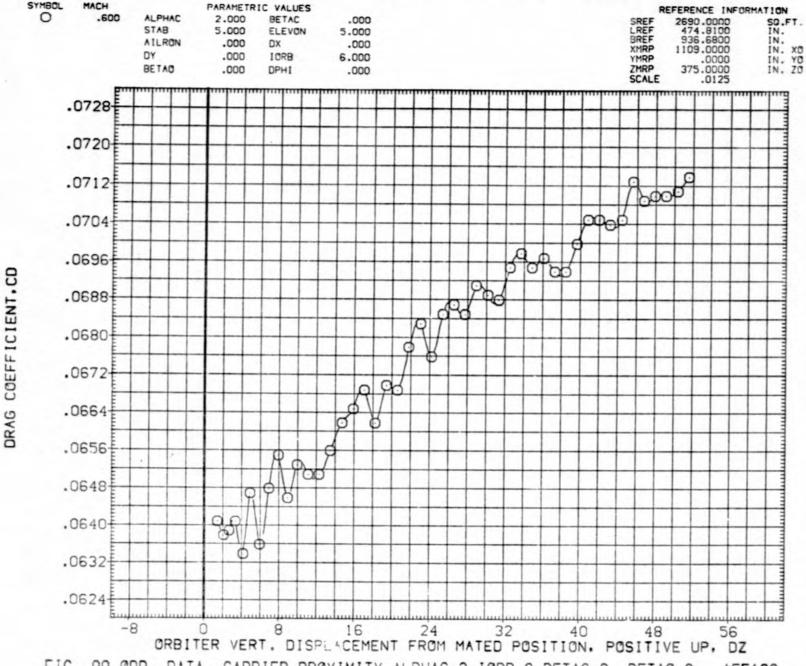
LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE106)

SYMBOL	MACH	PARAMETRIC VALUES						REFERENCE INFORMATION		
O	.603	ALPHAC	.000	BETAC	-5.000		SREF	2690.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000		LREF	474.8100	IN.
		BDFLAP	.000	DX	.000		BREF	936.6800	IN.
		DY	.000	IORB	6.000		XMRP	1109.0000	IN. XO
		BETAO	-5.000	RUDDER	.000		YMRP	.0000	IN. YO
							ZMRP	375.0000	IN. ZO
							SCALE	.0125	

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG. 97 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=6,BETAC=-5,BETAO=-5, AFE106

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE106)

FIG. 97 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=6,BETAC=-5,BETAO=-5, AFE106

FIG. 97 ORB. DATA, CARRIER PROXIMITY, ALPHAC=0, IORB=6, BETAC=-5, BETAO=-5, AFE106
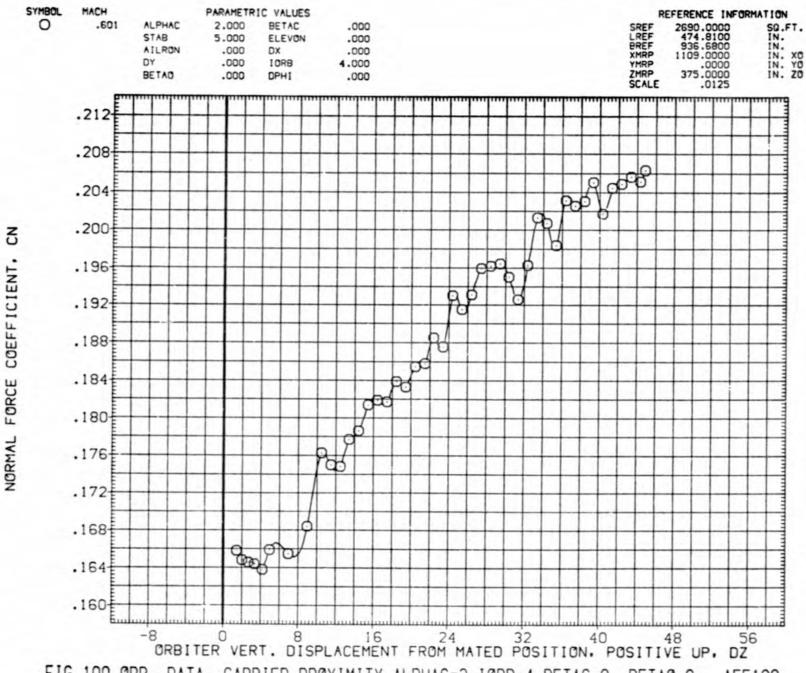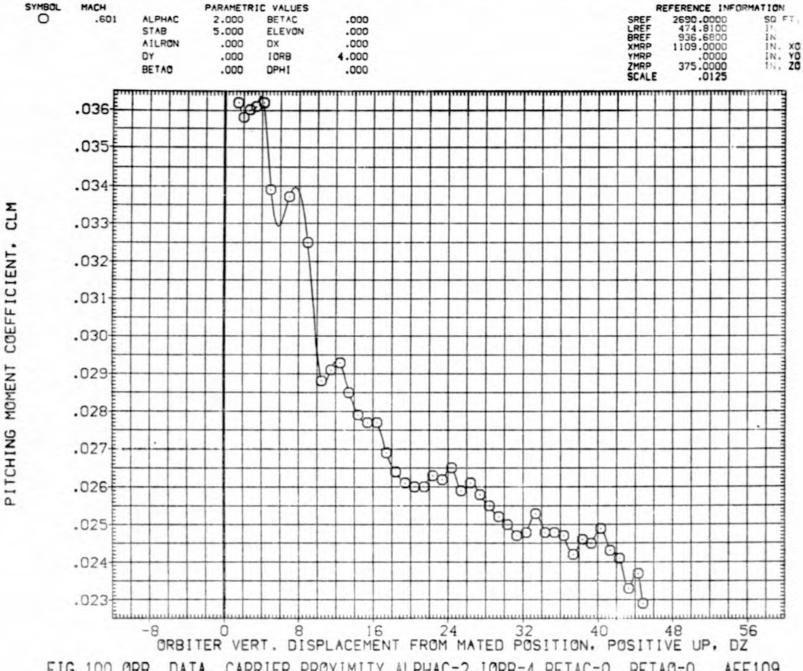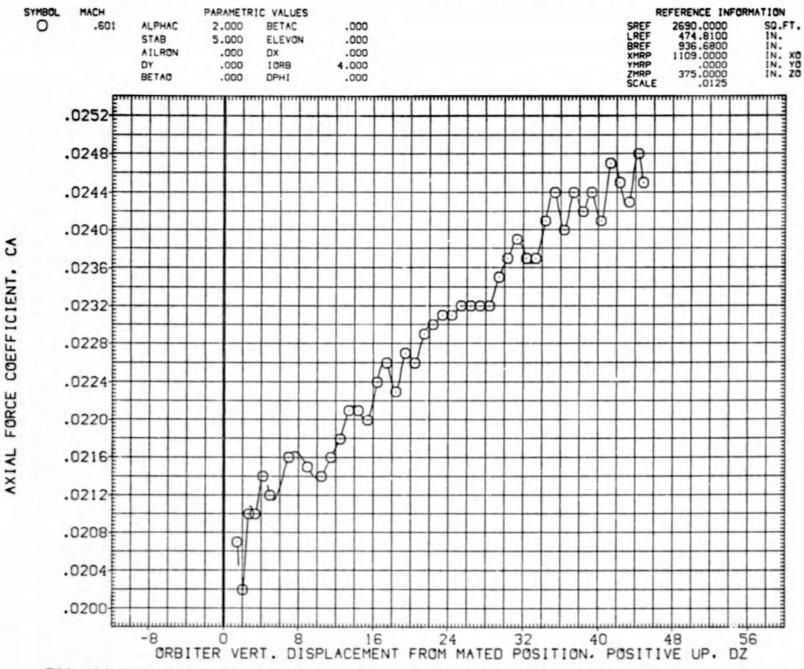
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE106)

FIG. 97 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=6,BETAC=-5,BETAO=-5, AFE106

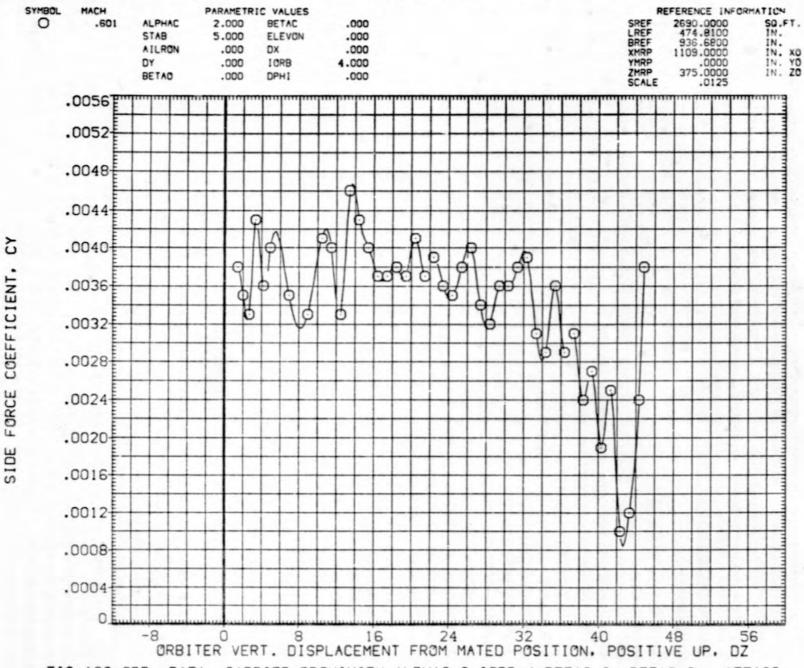PAGE 752

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE107)

FIG. 98 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=8,BETAC=-5,BETAO=-5, AFE107

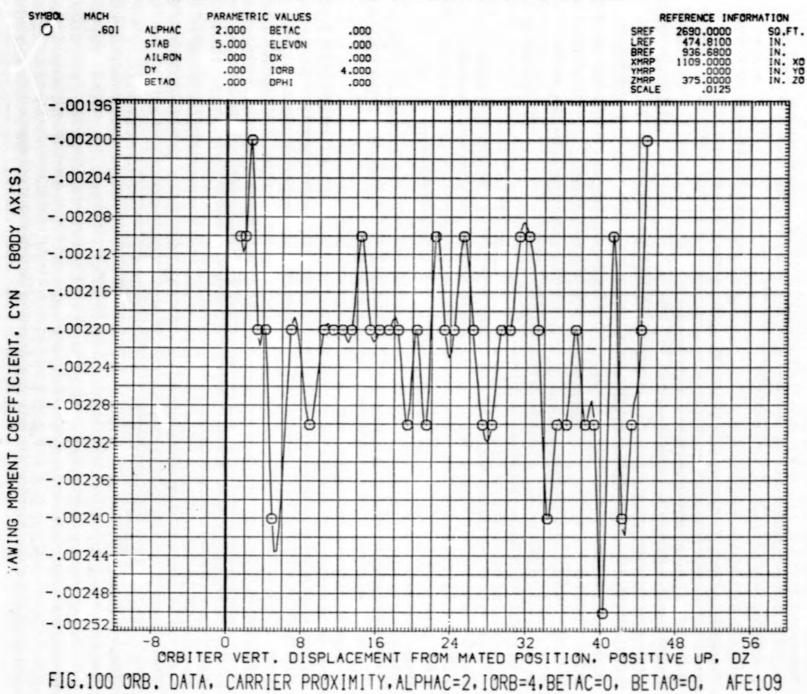LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE107)

FIG. 98 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=8,BETAC=-5,BETAO=-5, AFE107

PAGE   754

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE107)

FIG. 98 ORB. DATA, CARRIER PROXIMITY, ALPHAC=0, ICRB=8, BETAC=-5, BETA0=-5, AFE107

LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE107)

SYMBOL	MACH	PARAMETRIC VALUES			
O	.600	ALPHAC	.000	BETAC	-5.000
		STAB	5.000	ELEVON	5.000
		BDFLAP	.000	DX	.000
		DY	.000	IORB	8.000
		BETAO	-5.000	RUDDER	.000

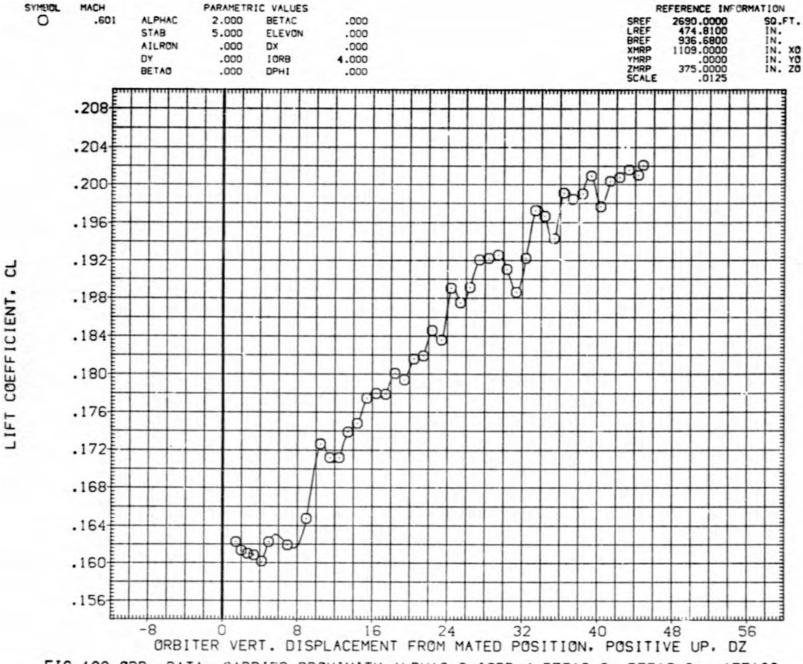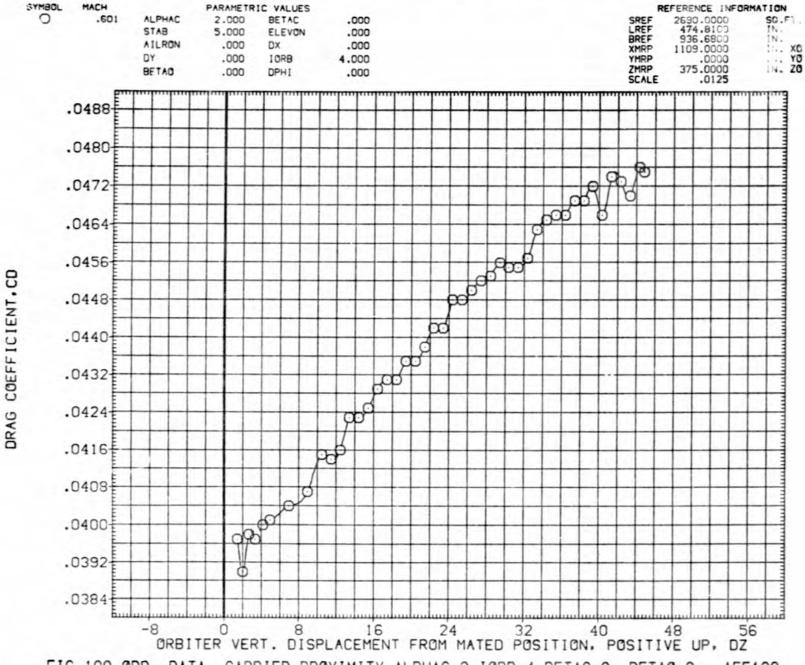| REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

FIG. 98 ORB. DATA, CARRIER PROXIMITY,ALPHAC=O,IORB=8,BETAC=-5,BETAO=-5, AFE107

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE107)

FIG. 98 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=8,BETAC=-5,BETAO=-5, AFE107

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE107)

FIG. 98 ORB. DATA, CARRIER PROXIMITY, ALPHAC=0, IORB=8, BETAC=-5, BETAO=-5, AFE107

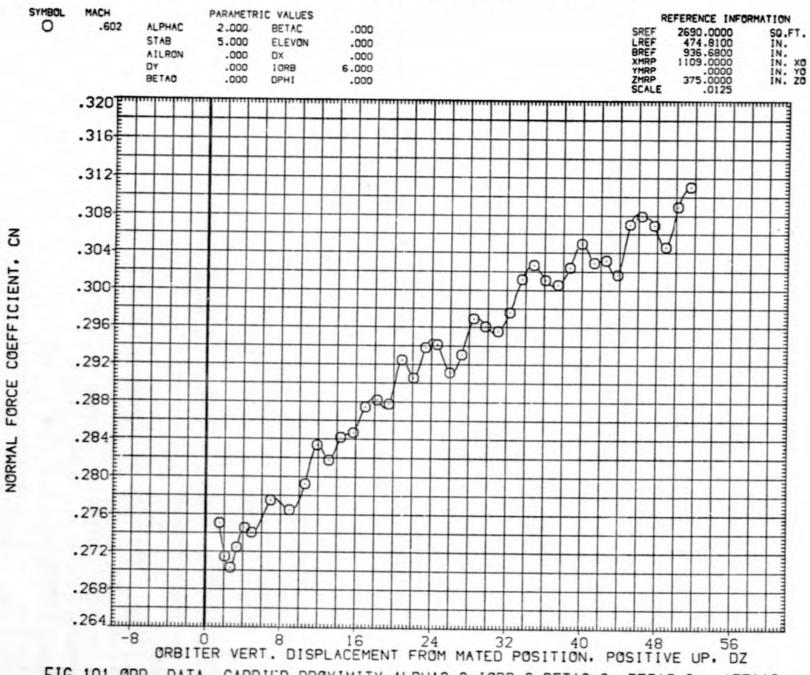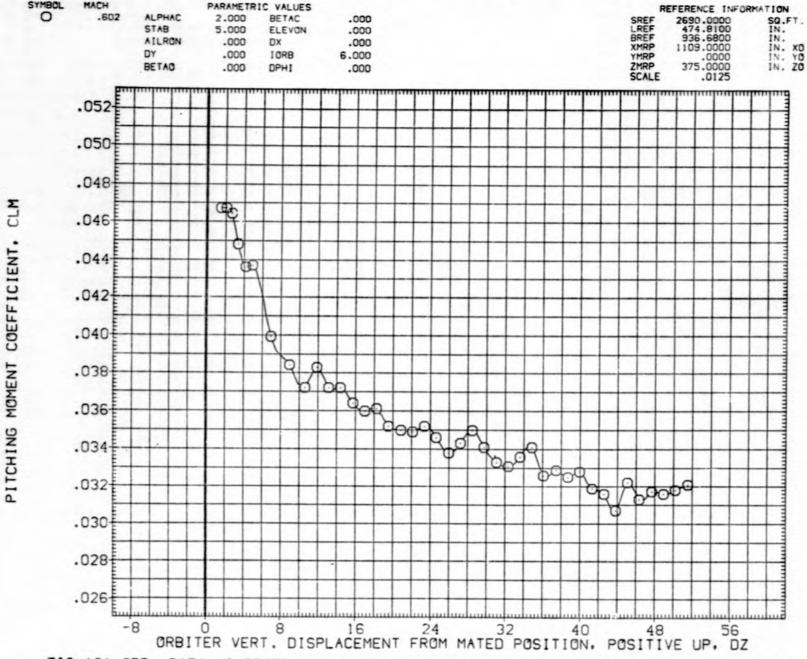LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE107)

FIG. 98 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=8,BETAC=-5,BETAO=-5, AFE107

FIG. 98 ORB. DATA, CARRIER PROXIMITY, ALPHAC=0, IORB=8, BETAC=-5, BETAO=-5, AFE107
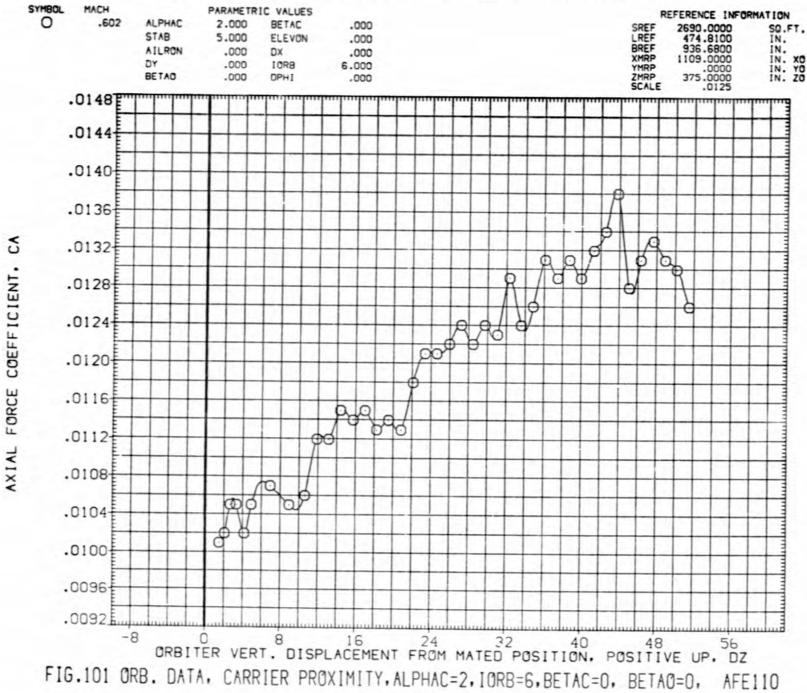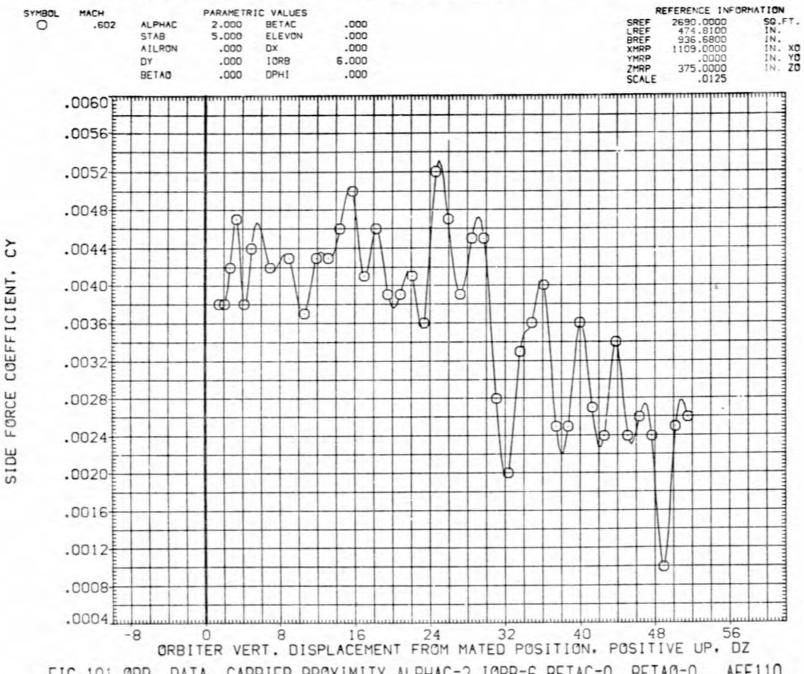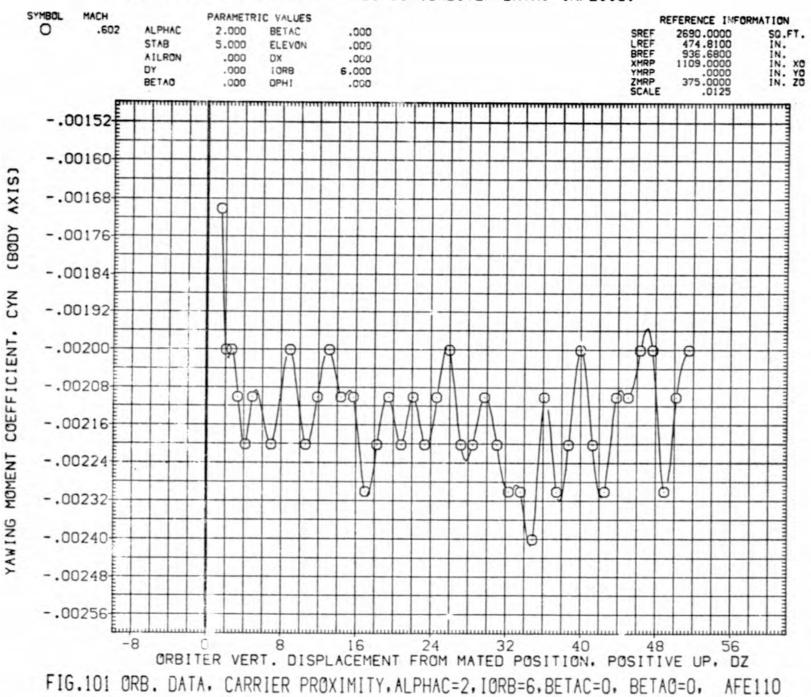
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE108)

SYMBOL	MACH	PARAMETRIC VALUES			
O	.600	ALPHAC	2.000	BETAC	.000
		STAB	5.000	ELEVON	5.000
		AILRON	.000	DX	.000
		DY	.000	IORB	6.000
		BETAO	.000	DPHI	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

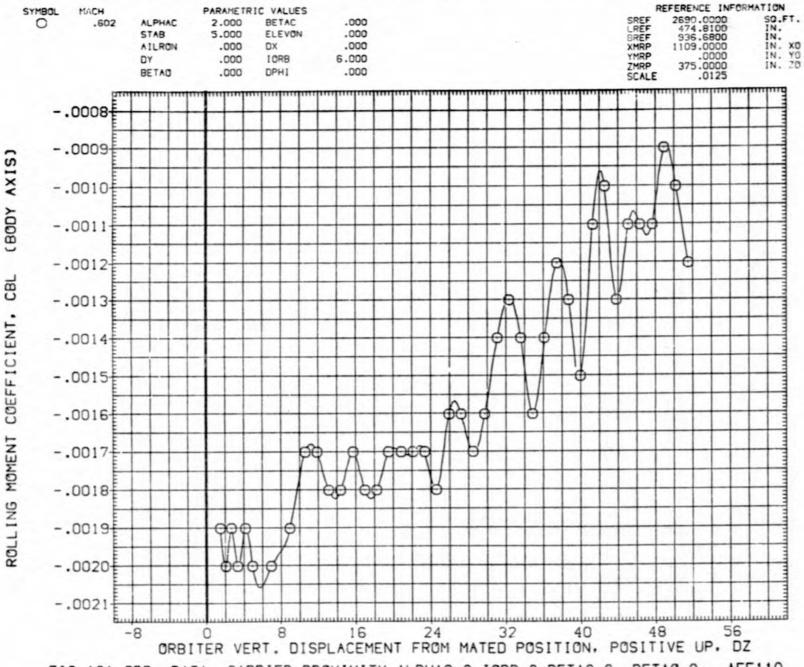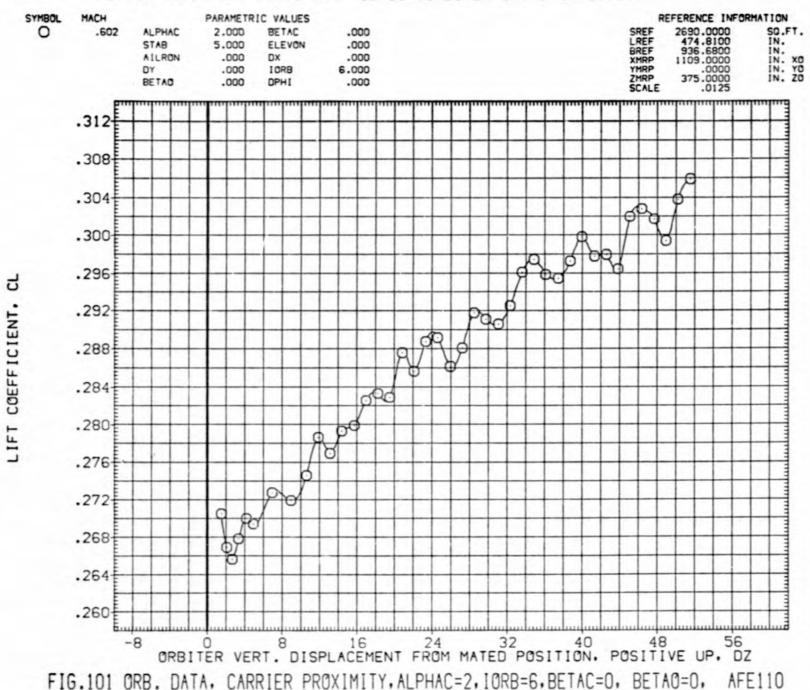FIG. 99 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE108

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE108)

FIG. 99 ORB. DATA, CARRIER PROXIMITY, ALPHAC=2, IORB=6, CETAC=0, BETAC=0, AFE108

LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE108)

FIG. 99 ØRB. DATA, CARRIER PRØXIMITY,ALPHAC=2,IØRB=6,BETAC=0, BETAØ=0, AFE108

FIG. 99 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0,   AFE108
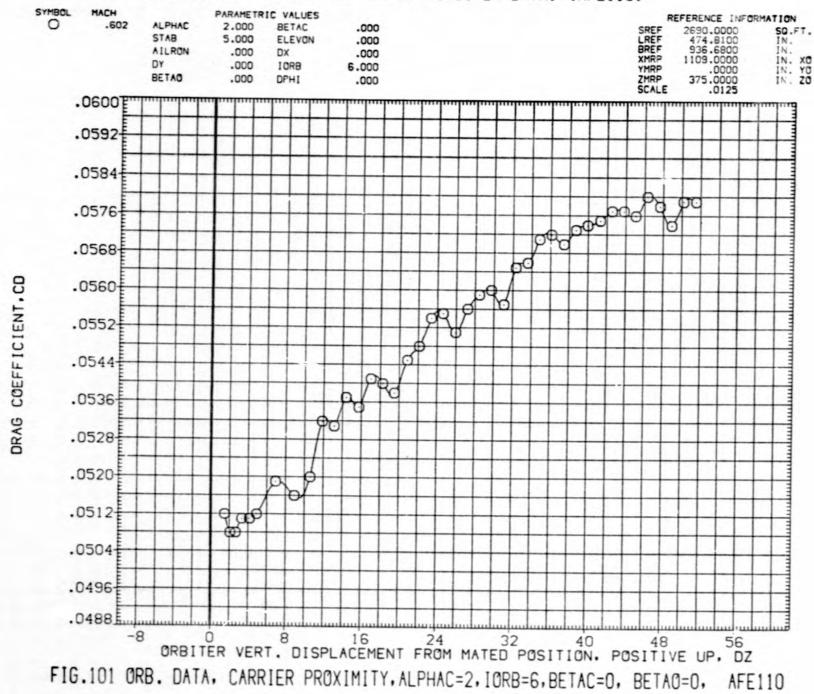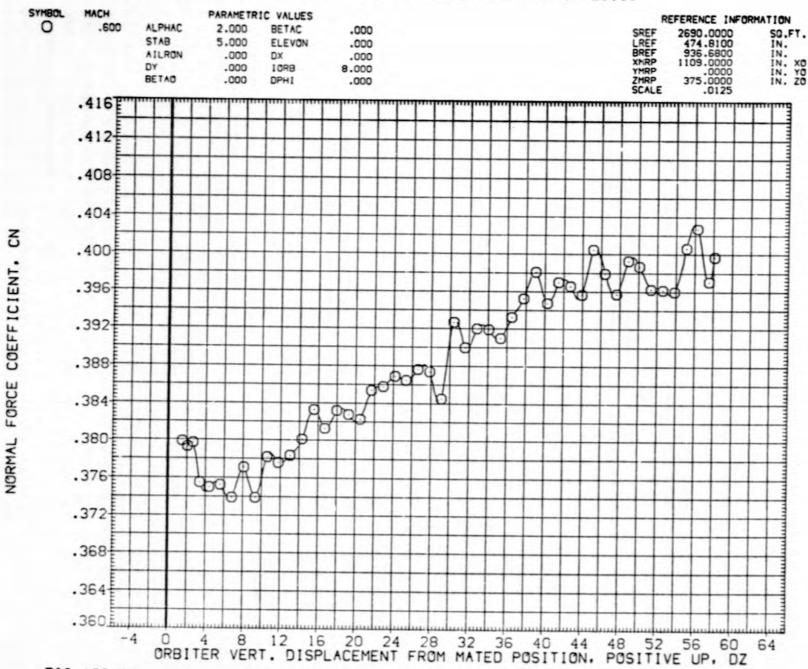
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE108)

FIG. 99 ORB. DATA, CARRIER PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, AFE108

LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE108)

FIG. 99 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE108
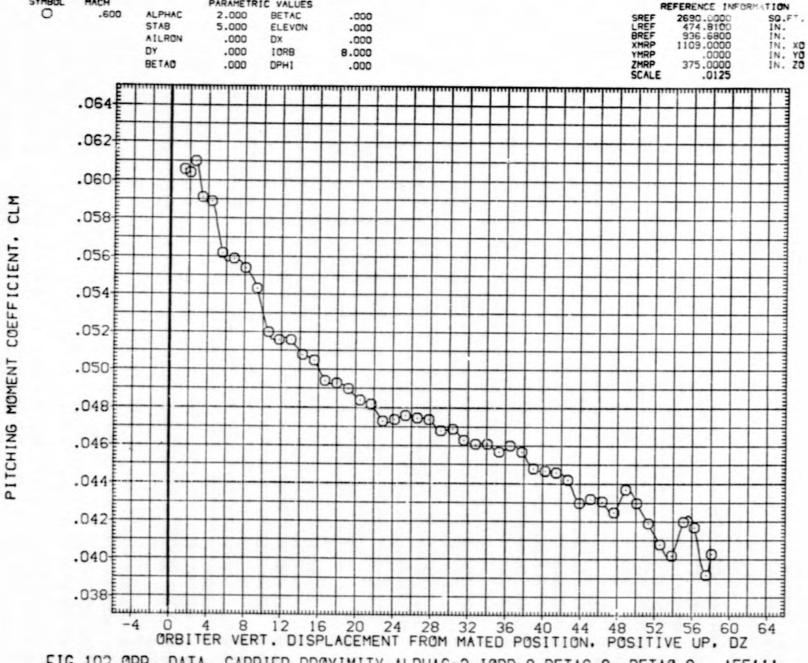
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE108)

FIG. 99 ORB. DATA, CARRIER PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, AFE108

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE108)

FIG. 99 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE108

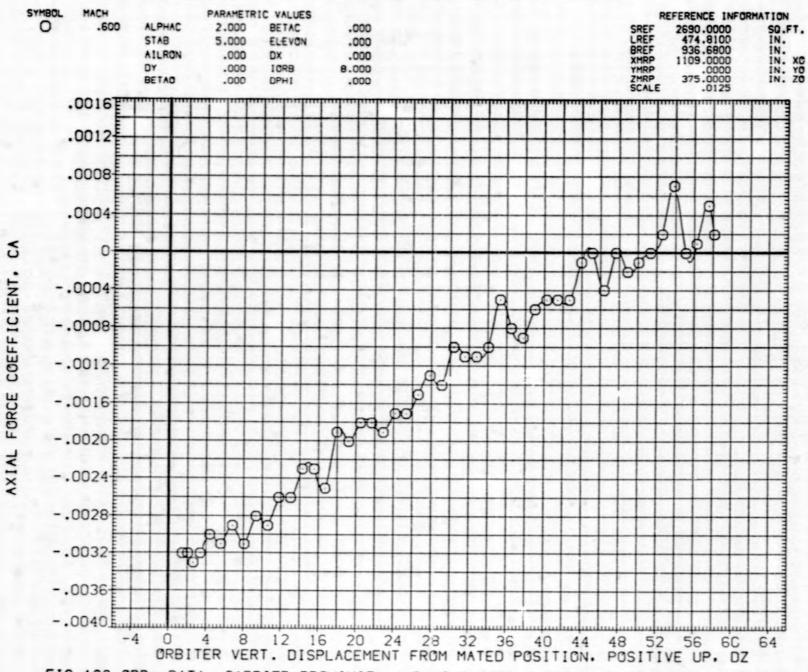LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE109)

FIG.100 ORB. DATA, CARRIER PROXIMITY, ALPHAC=2,IORB=4,BETAC=0, BETAO=0, AFE109

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE109)

FIG.100 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=4,BETAC=0, BETAO=0, AFE109

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LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE109)

FIG.100 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=4,BETAC=0, BETAO=0, AFE109

FIG.100 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=4,BETAC=0, BETAO=0, AFE109

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE109)

FIG.100 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=4,BETAC=0, BETAO=0, AFE109

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE109)
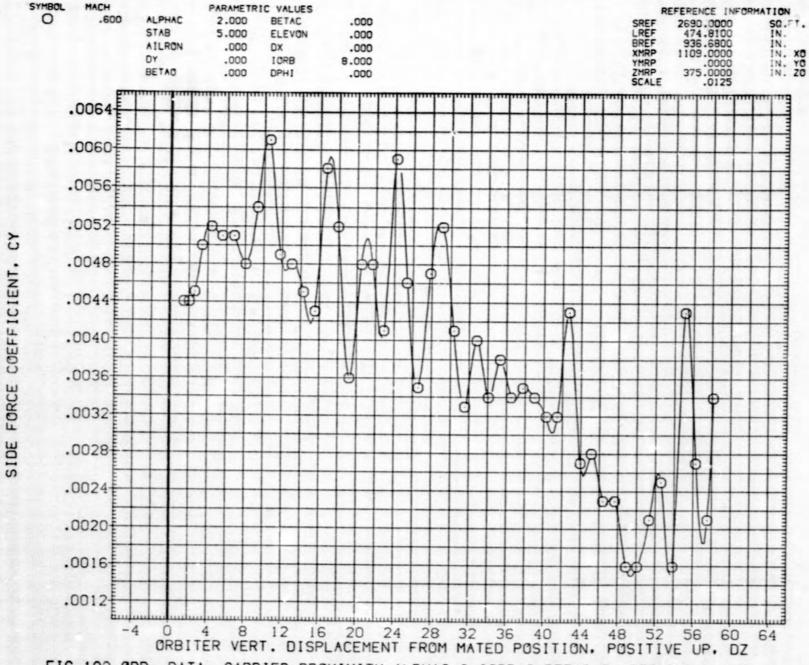
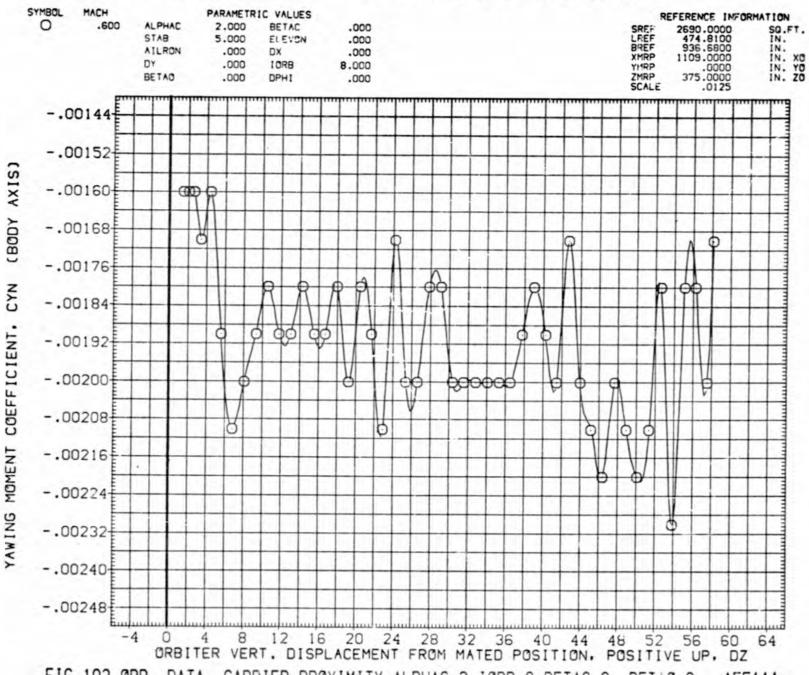FIG.100 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=4,BETAC=0, BETAO=0, AFE109

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LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE109)

FIG.100 ORB. DATA, CARRIER PROXIMITY, ALPHAC=2, IORB=4, BETAC=0, BETAO=0, AFE109

FIG.100 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=4,BETAC=0, BETA0=0, AFE109

FIG.101 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE110

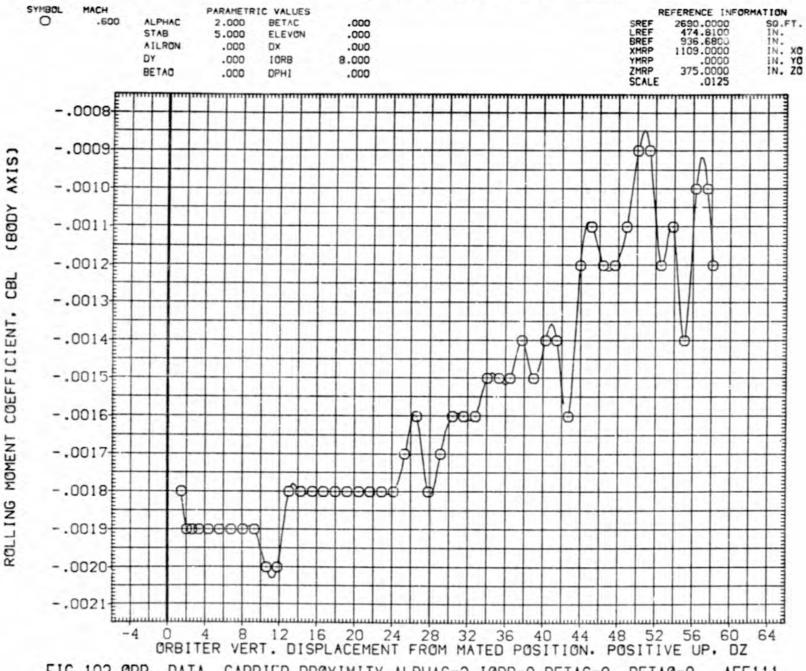LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE110)
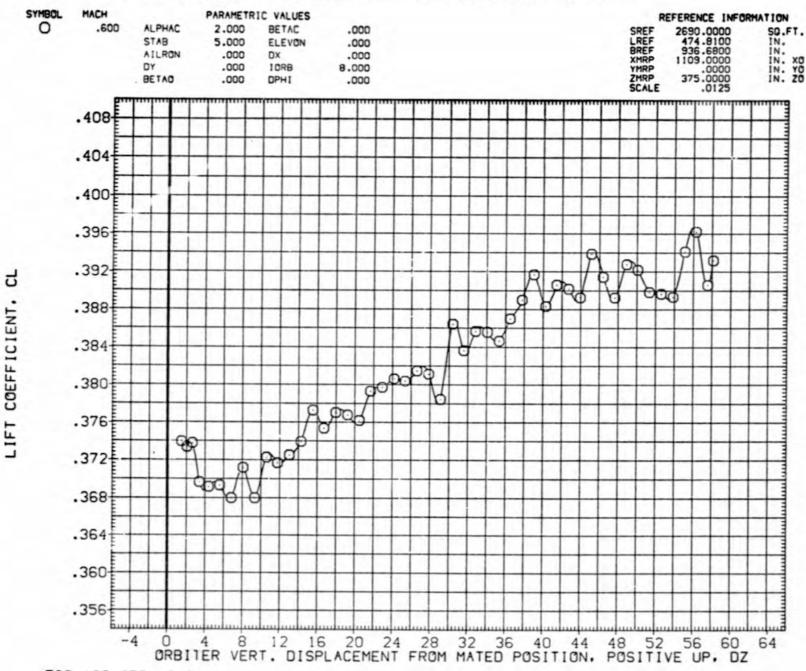
FIG.101 ORB. DATA, CARRIER PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, AFE110

LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE110)

FIG.101 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE110

LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE110)

FIG.101 ORB. DATA, CARRIER PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, AFE110

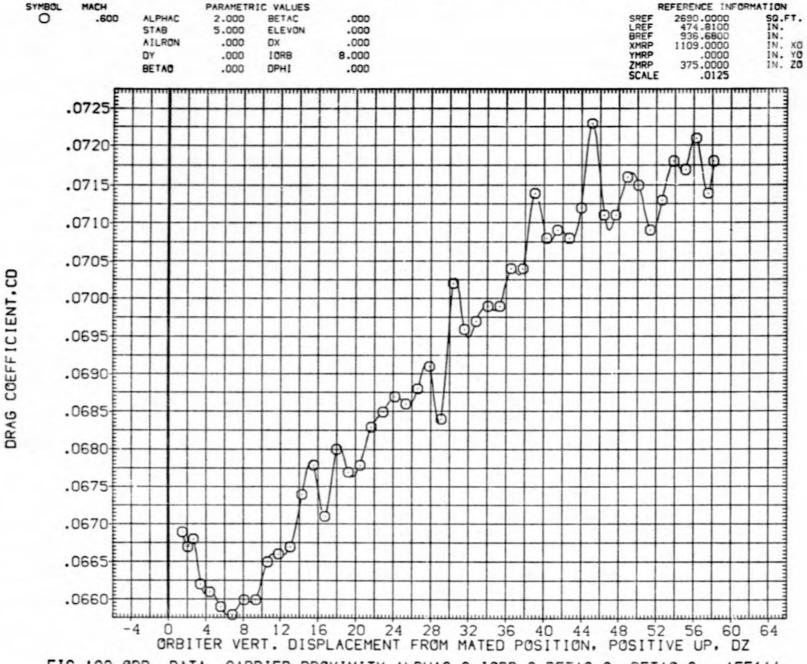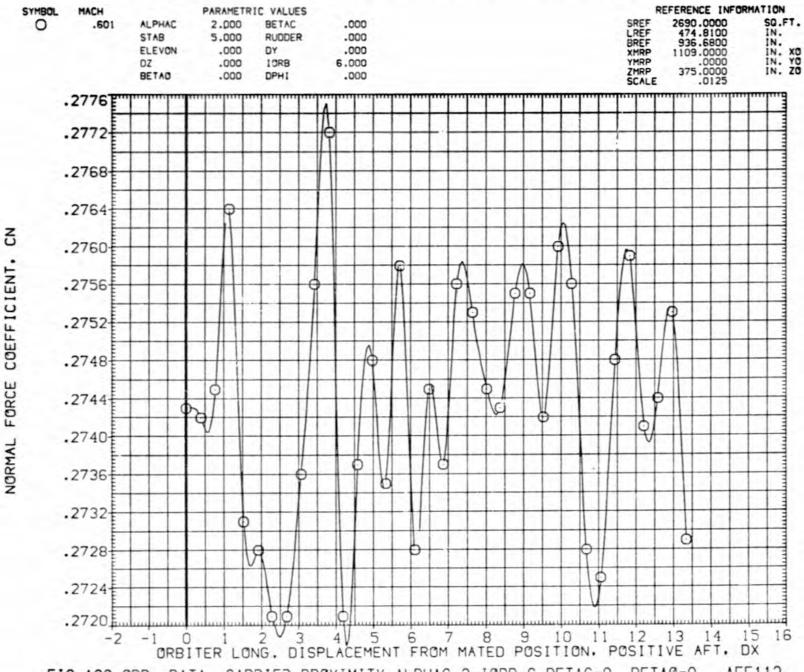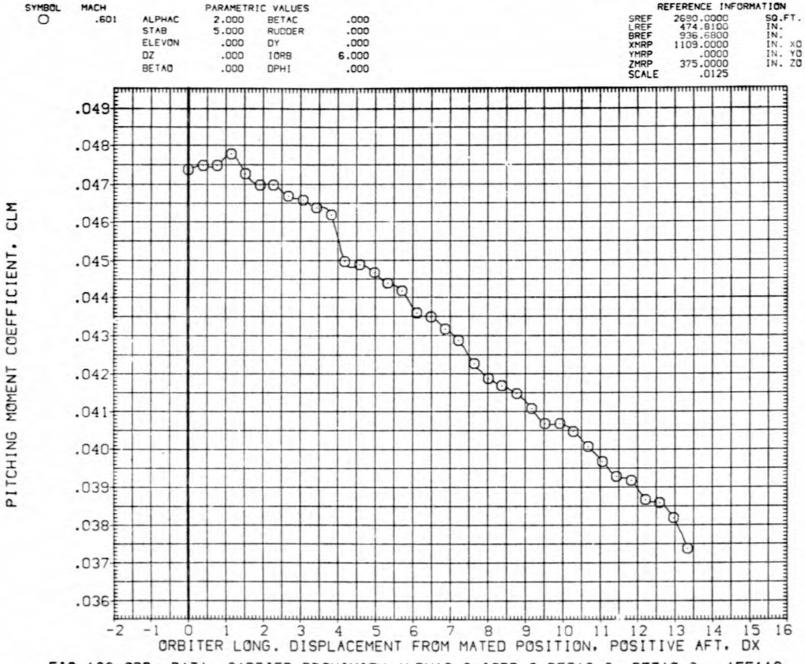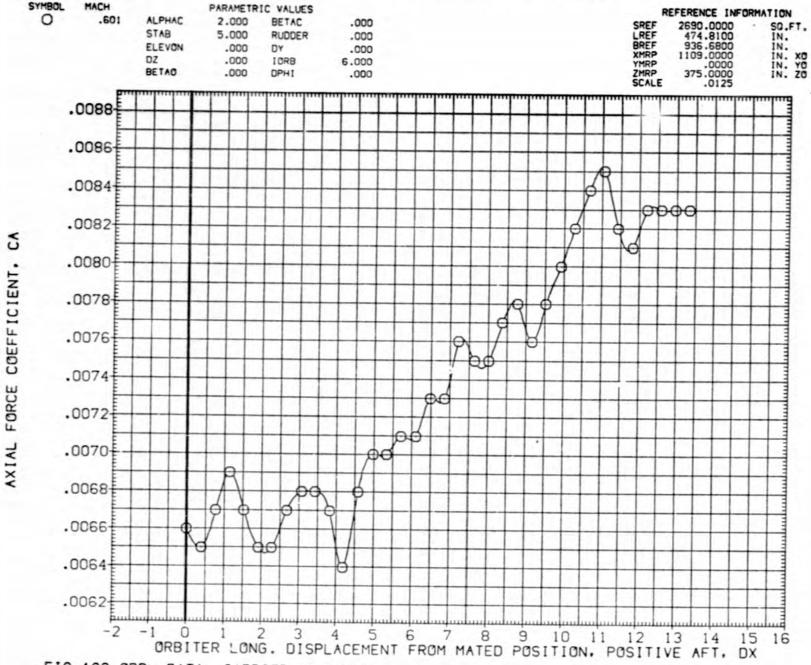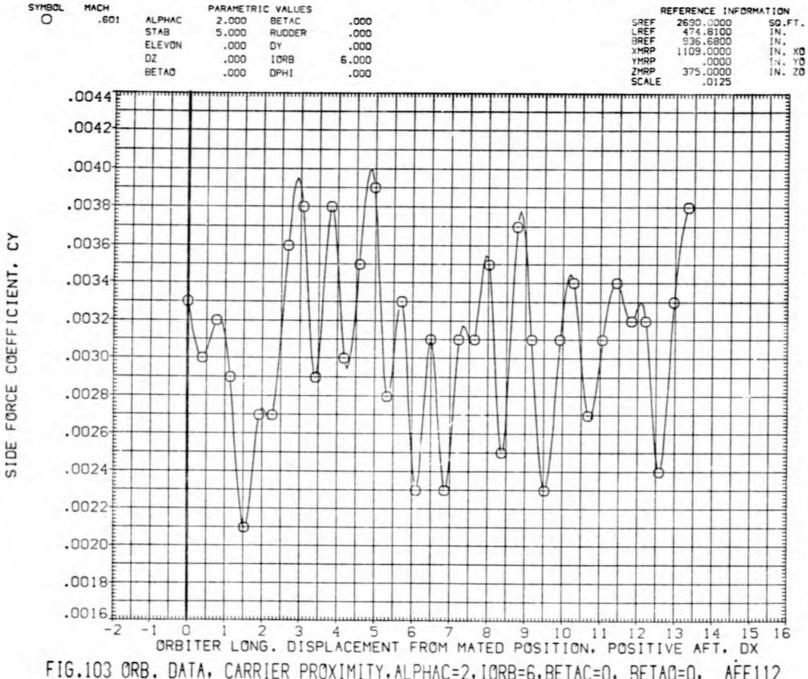LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE110)

FIG.101 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE110

FIG.101 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE110

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LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE110)

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.602	ALPHAC	2.000	BETAC	.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	ELEVON	.000	LREF	474.8100	IN.
		AILRON	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	6.000	XMRP	1109.0000	IN. XO
		BETAO	.000	DPHI	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

FIG.101 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE110

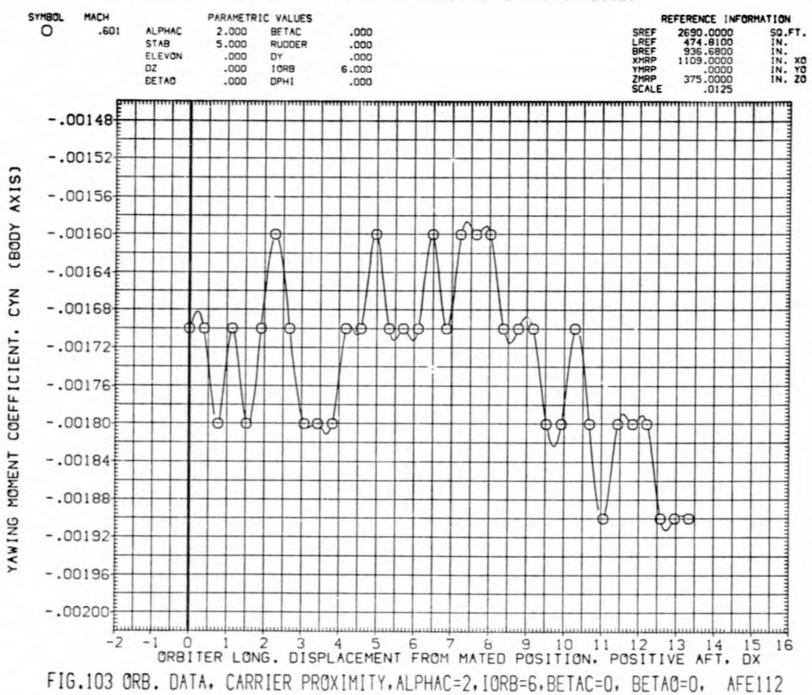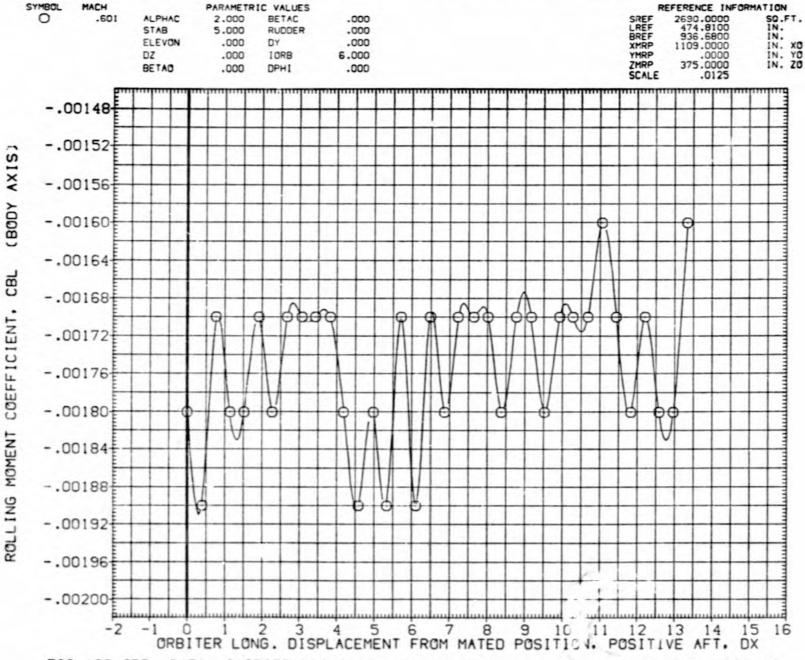# LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE110)

FIG.101 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE110

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LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE111)

FIG.102 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=8,BETAC=0, BETAO=0, AFE111

FIG.102 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=8,BETAC=0, BETA0=0, AFE111

SYMBOL   MACH   PARAMETRIC VALUES   REFERENCE INFORMATION

O   .600   ALPHAC   2.000   BETAC   .000   SREF   2690.0000   SQ.FT.
                    STAB   5.000   ELEVON   .000   LREF   474.8100   IN.
                    AILRON   .000   DX   .000   BREF   936.6800   IN.
                    DY   .000   IORB   8.000   XMRP   1109.0000   IN. XO
                    BETAO   .000   DPHI   .000   YMRP   .0000   IN. YO
                                                                ZMRP   375.0000   IN. ZO
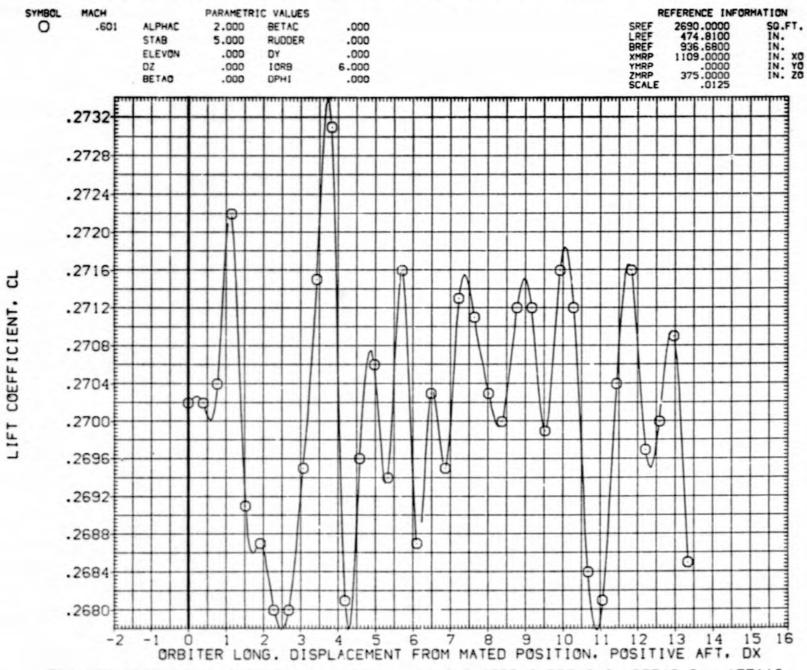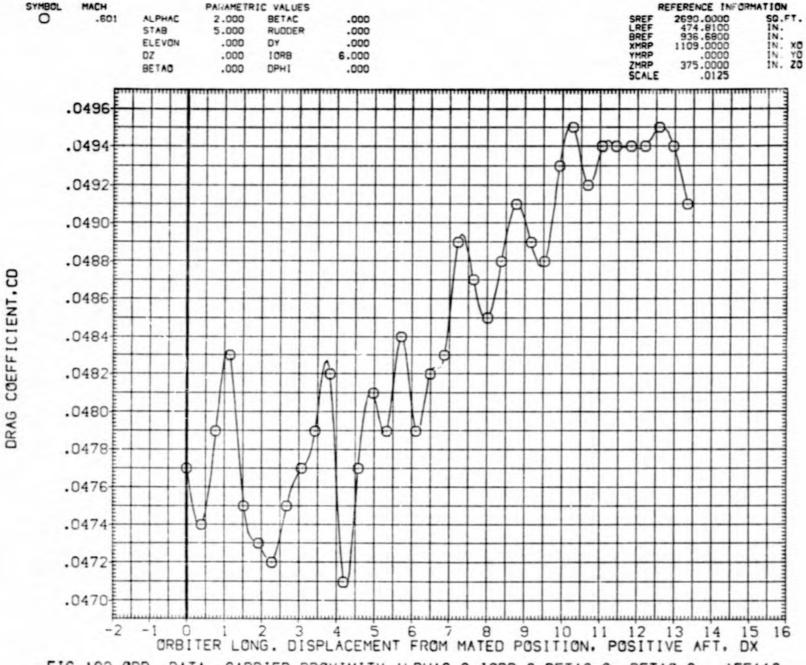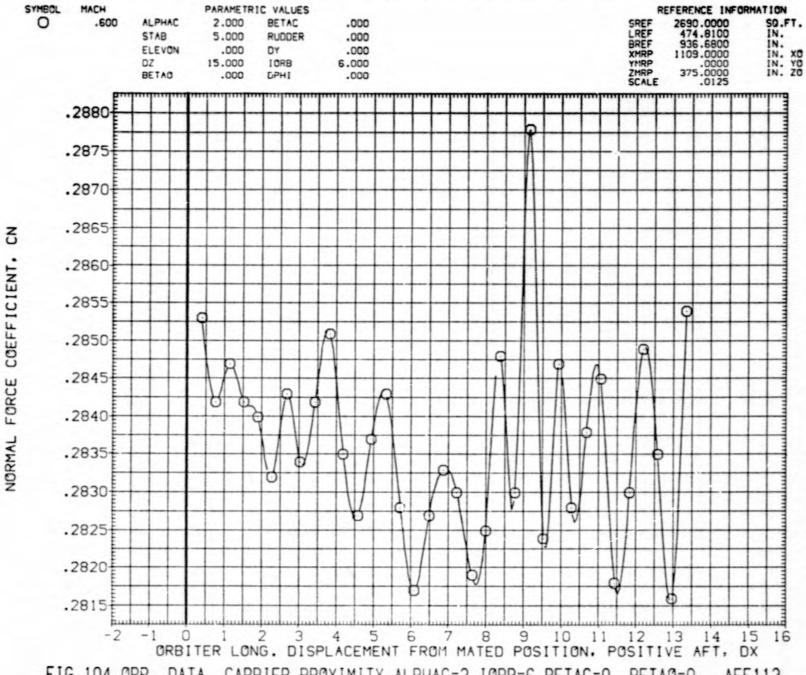   SCALE   .0125

FIG.102 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=8,BETAC=0, BETAO=0,   AFE111

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE111)

FIG.102 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=8,BETAC=0, BETA0=0, AFE111

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LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE111)

FIG.102 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=8,BETAC=0, BETAO=0,   AFE111

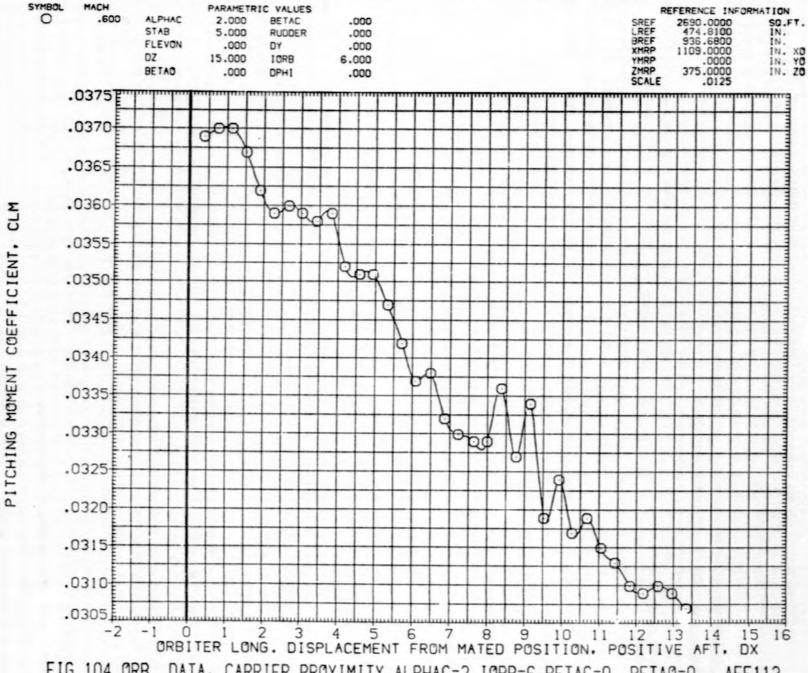LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE111)

FIG.102 ORB. DATA, CARRIER PROXIMITY, ALPHAC=2, IORB=8, BETAC=0, BETAO=0, AFE111

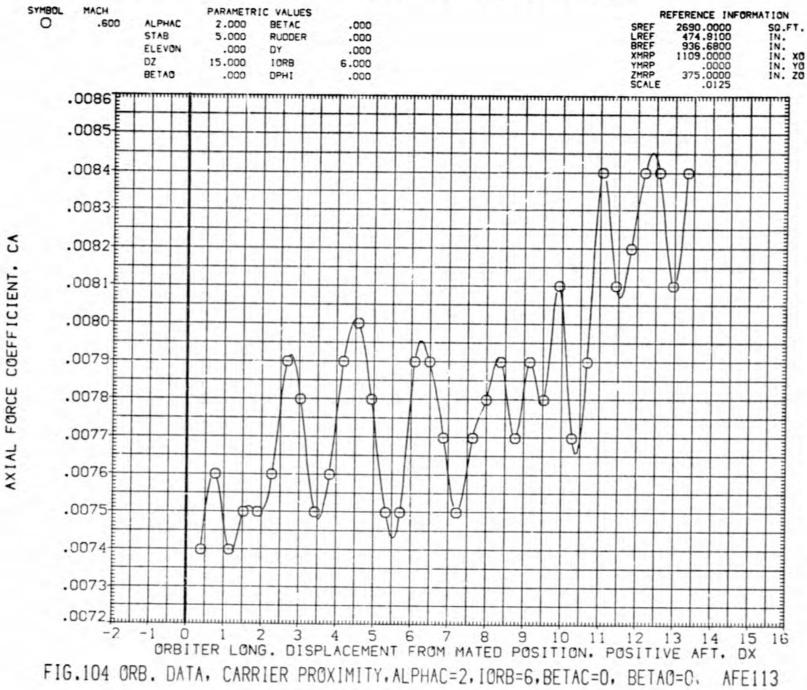# LTV44-559(CA26) 747/1 ATY 06 S! (ORBITER DATA) (AFE111)

FIG.102 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=8,BETAC=0, BETAO=0, AFE111

FIG.102 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=8,BETAC=0, BETAO=0, AFE111
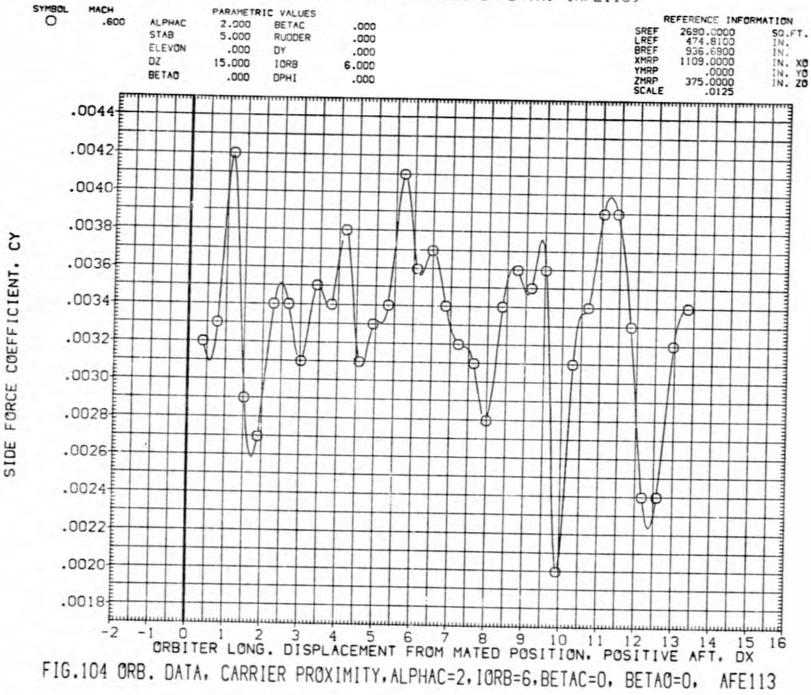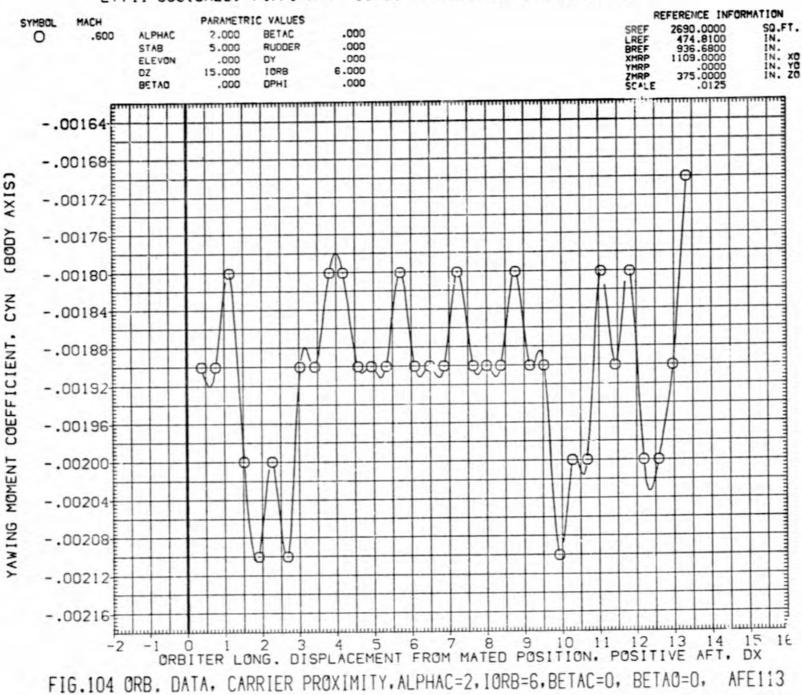
LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE112)

FIG.103 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE112

FIG.103 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETA0=0, AFE112

LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE112)

FIG.103 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE112

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE112)

FIG.103 ORB. DATA, CARRIER PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, AFE112

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LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE112)

FIG.103 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETA0=0, AFE112

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE112)

FIG.103 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE112
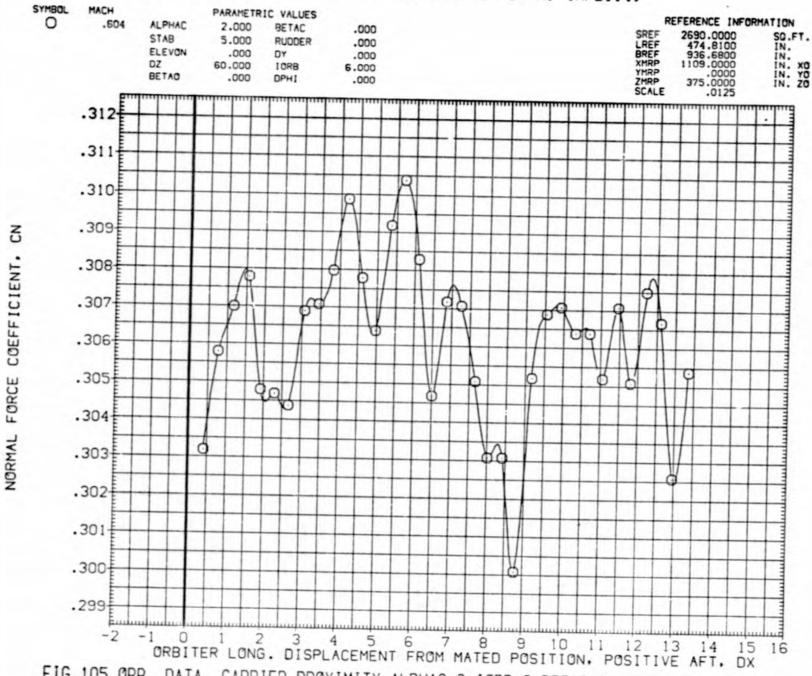
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE112)

FIG.103 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE112
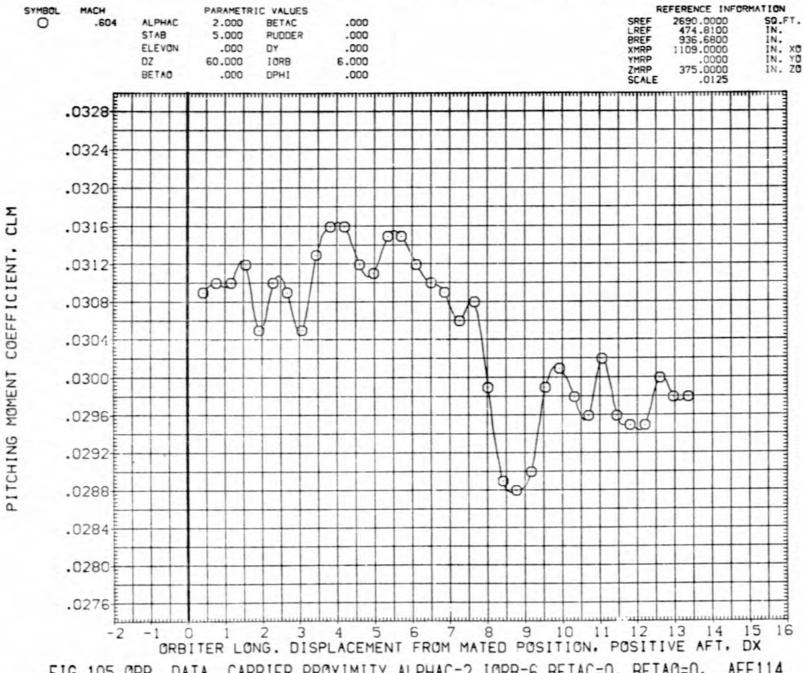
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE112)

FIG.103 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE112

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE113)

NORMAL FORCE COEFFICIENT, CN

ORBITER LONG. DISPLACEMENT FROM MATED POSITION, POSITIVE AFT, DX

FIG.104 ORB. DATA, CARRIER PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, AFE113

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE113)

FIG.104 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE113

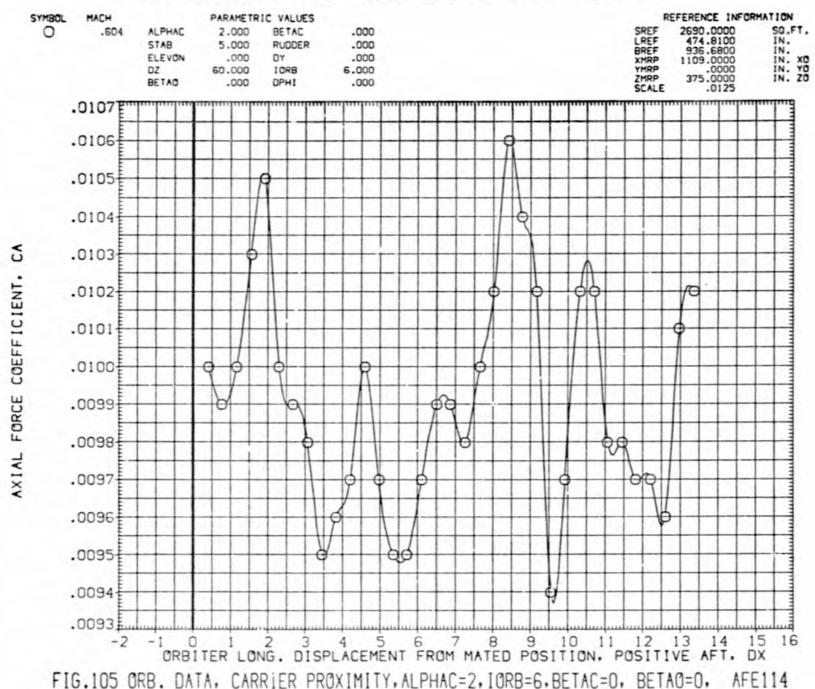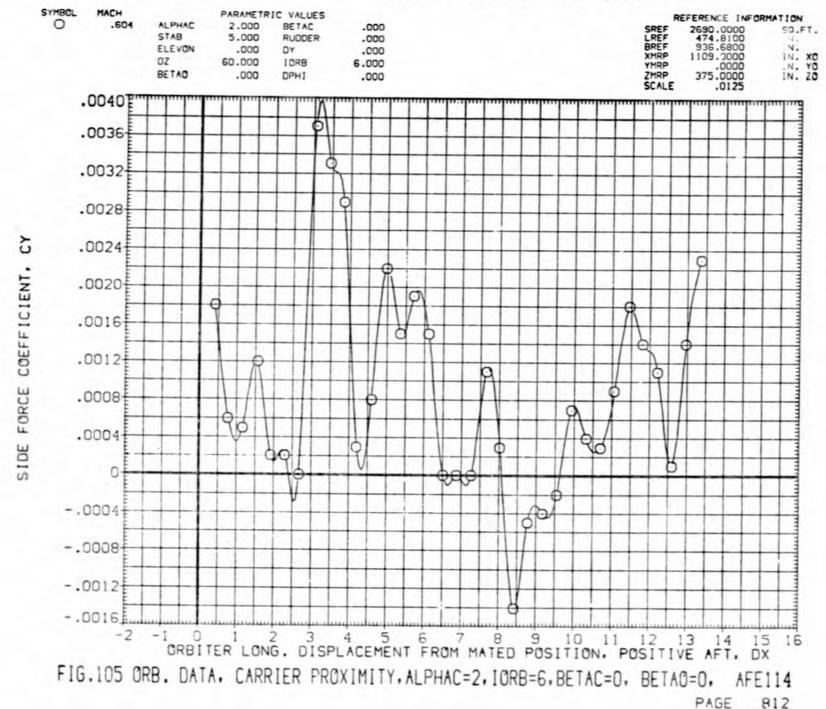# LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE113)

FIG.104 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE113

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE113)

FIG.104 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE113

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE113)

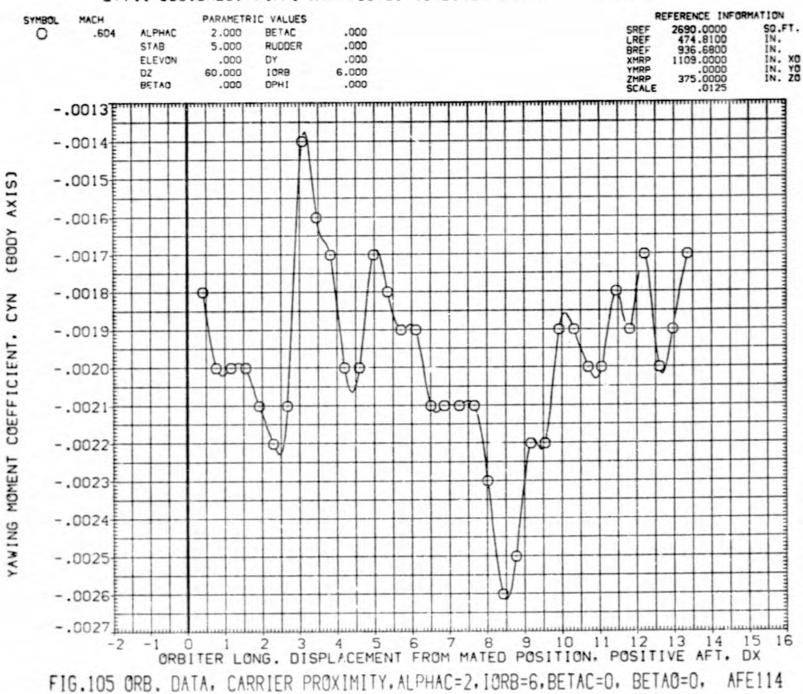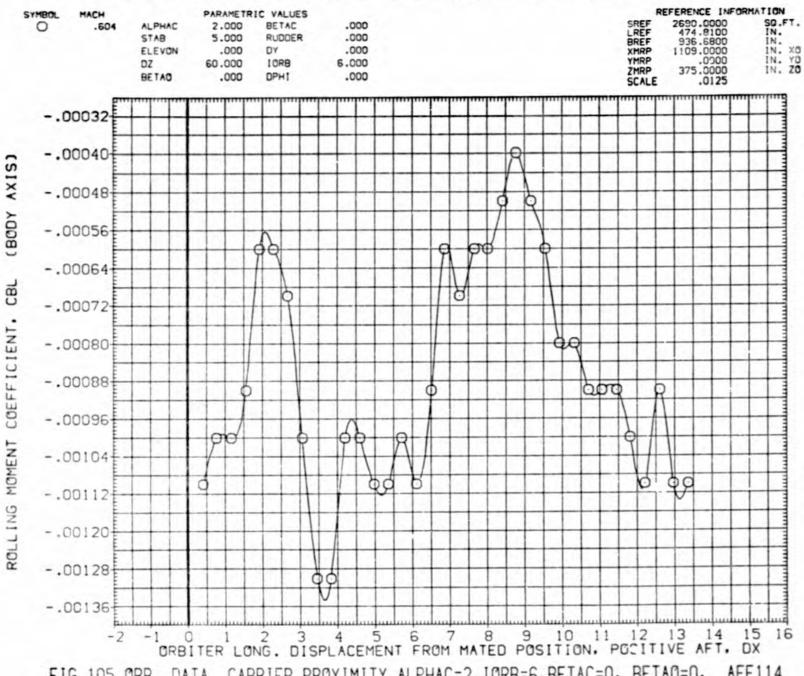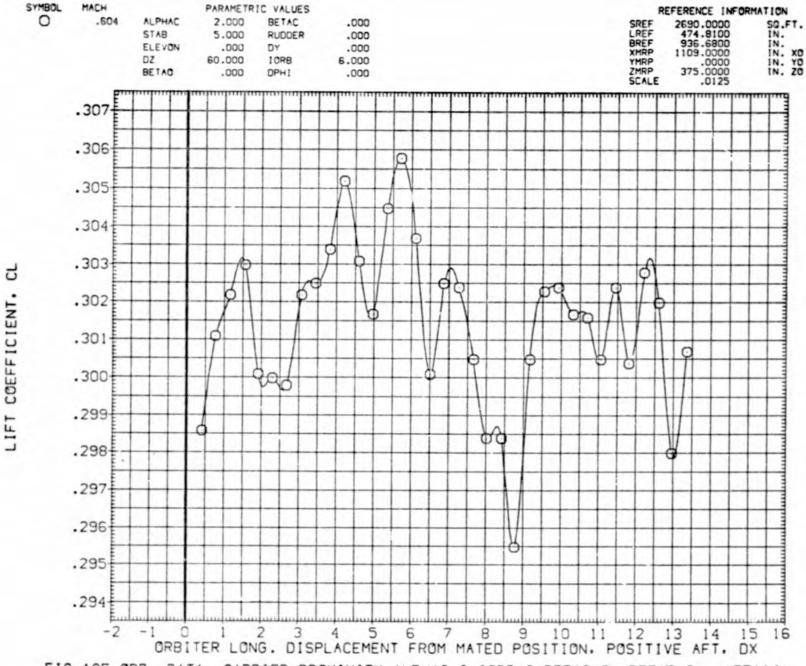FIG.104 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE113

SYMBOL   MACH

O   .600

PARAMETRIC VALUES

ALPHAC	2.000	BETAC	.000
STAB	5.000	RUDDER	.000
ELEVON	.000	DY	.000
DZ	15.000	IORB	6.000
BETAO	.000	DPHI	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

ORBITER LONG. DISPLACEMENT FROM MATED POSITION, POSITIVE AFT, DX

FIG.104 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE113

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LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE113)

FIG.104 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE113

LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE113)

FIG.104 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE113
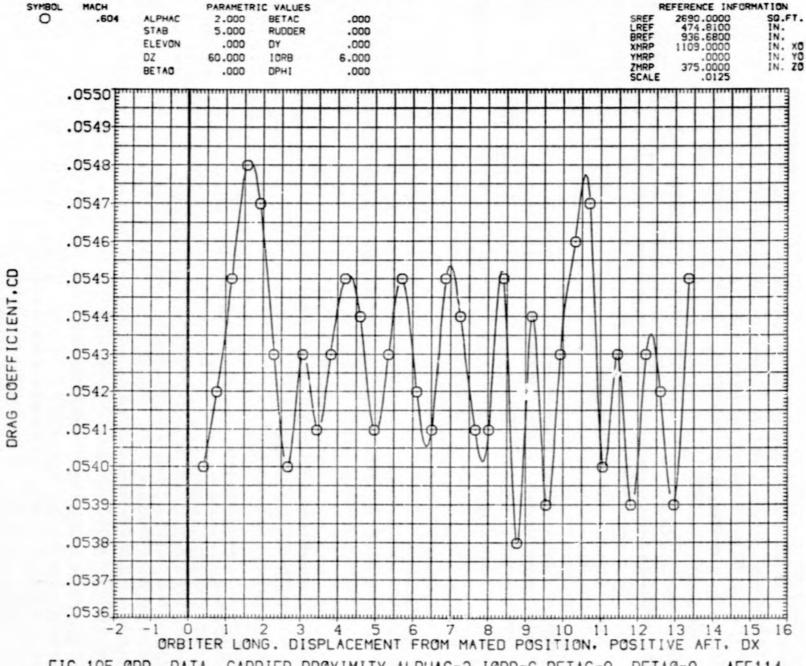
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE114)

FIG.105 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE114
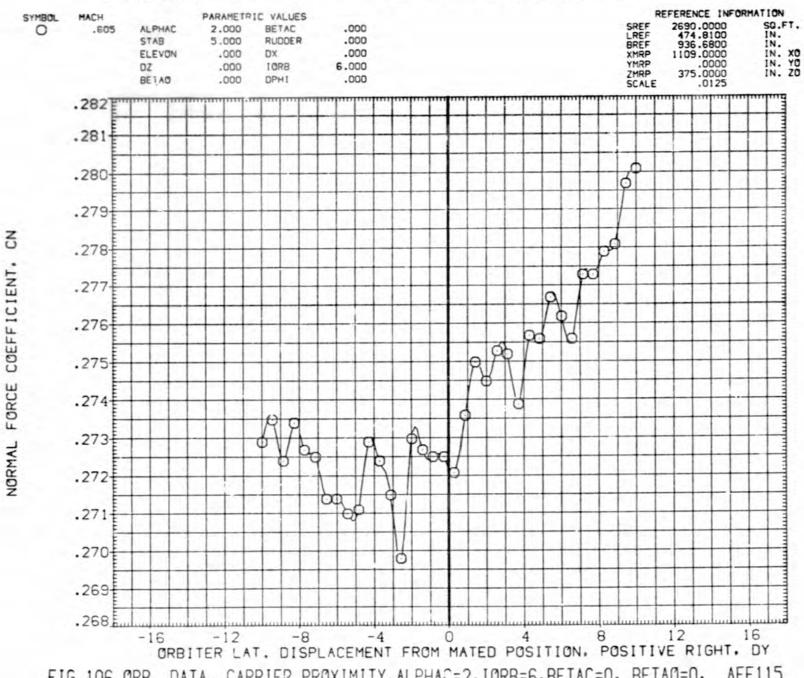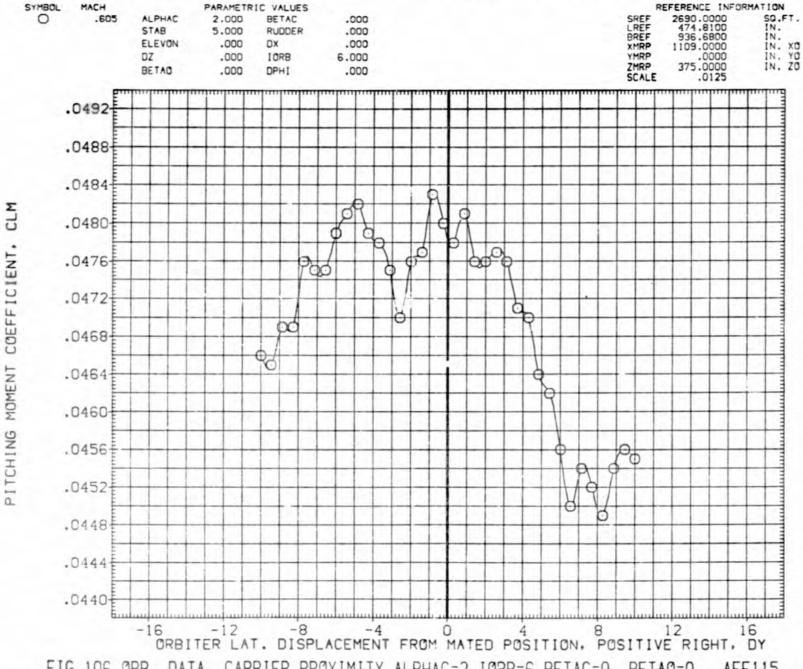
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE114)

FIG.105 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE114

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FIG.105 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE114

FIG.105 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE114

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LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE114)

FIG.105 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE114
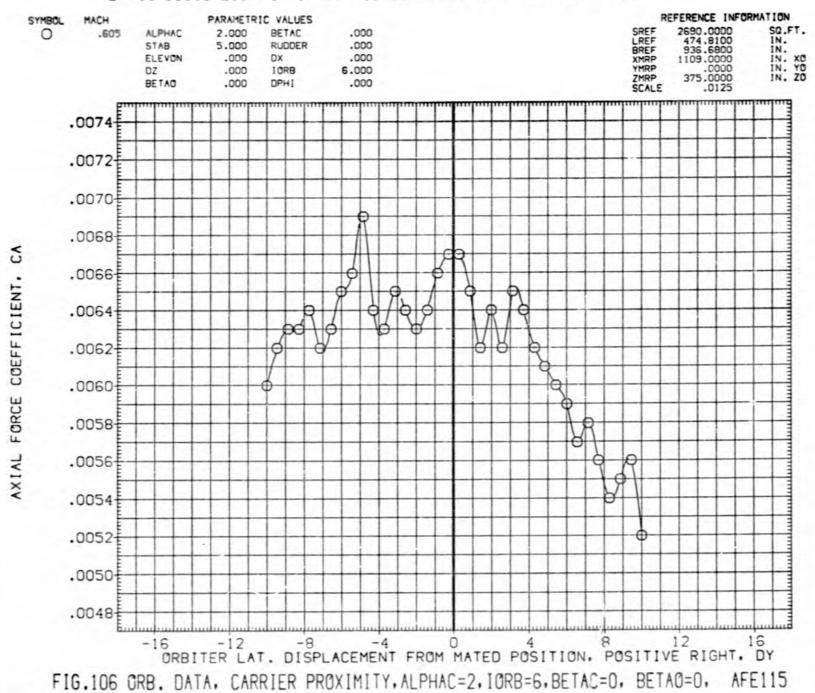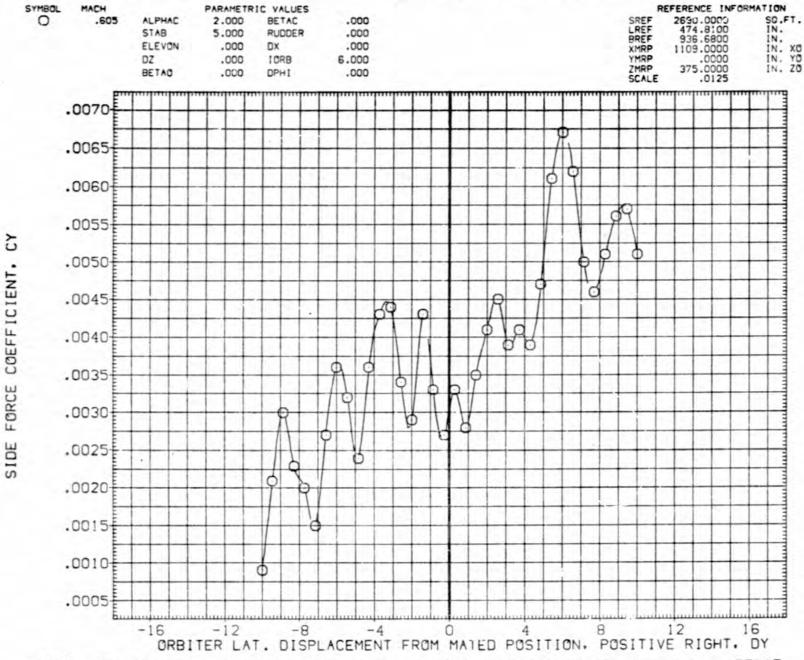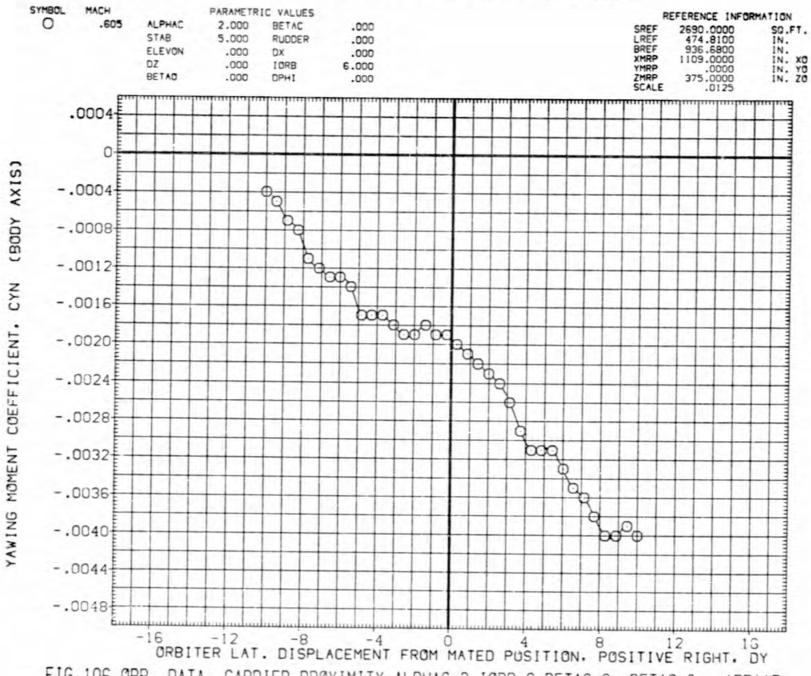
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE114)

SYMBOL	MACH		PARAMETRIC VALUES					REFERENCE INFORMATION		
O	.604	ALPHAC	2.000	BETAC	.000		SREF	2690.0000	SQ.FT.
		STAB	5.000	RUDDER	.000		LREF	474.8100	IN.
		ELEVON	.000	DY	.000		BREF	936.6800	IN.
							XMRP	1109.0000	IN. XO
		DZ	60.000	IORB	6.000		YMRP	.0000	IN. YO
		BETAO	.000	DPHI	.000		ZMRP	375.0000	IN. ZO
							SCALE	.0125	

FIG.105 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE114

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LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE114)

FIG.105 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE114
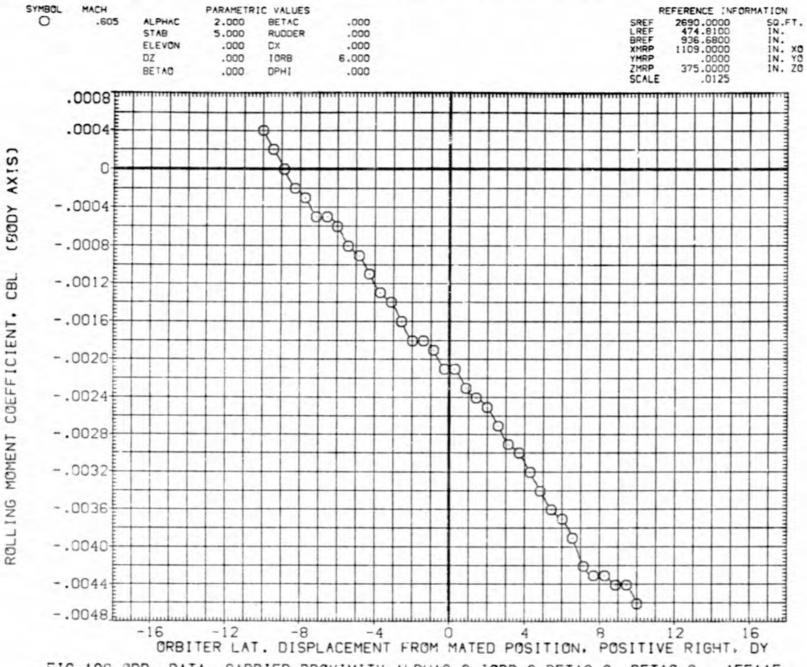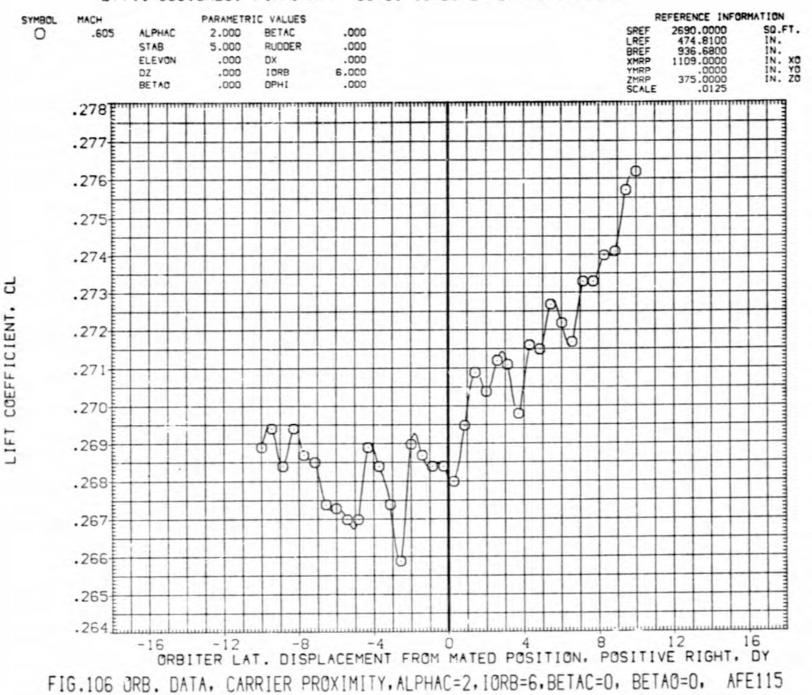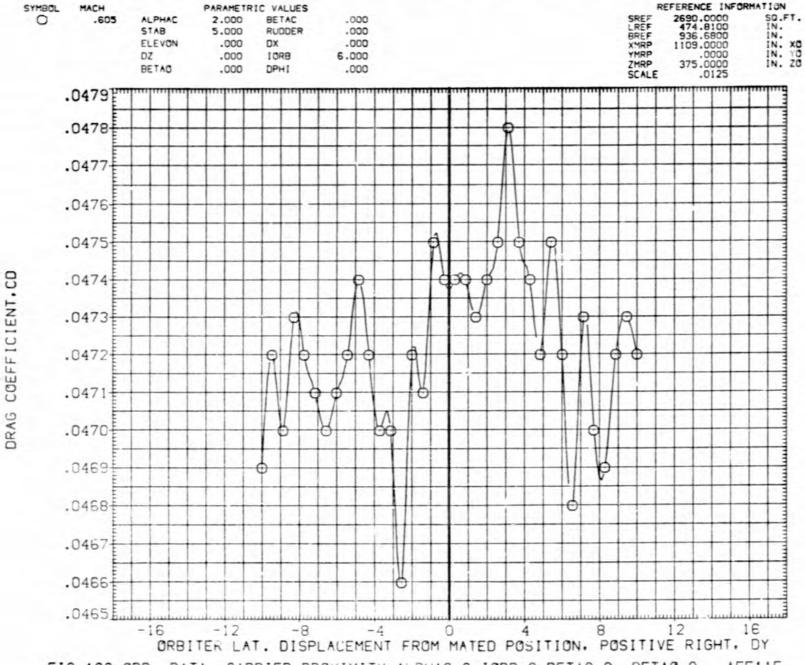
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE114)

FIG.105 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE114

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LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE115)

FIG.106 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE115

FIG.106 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE115
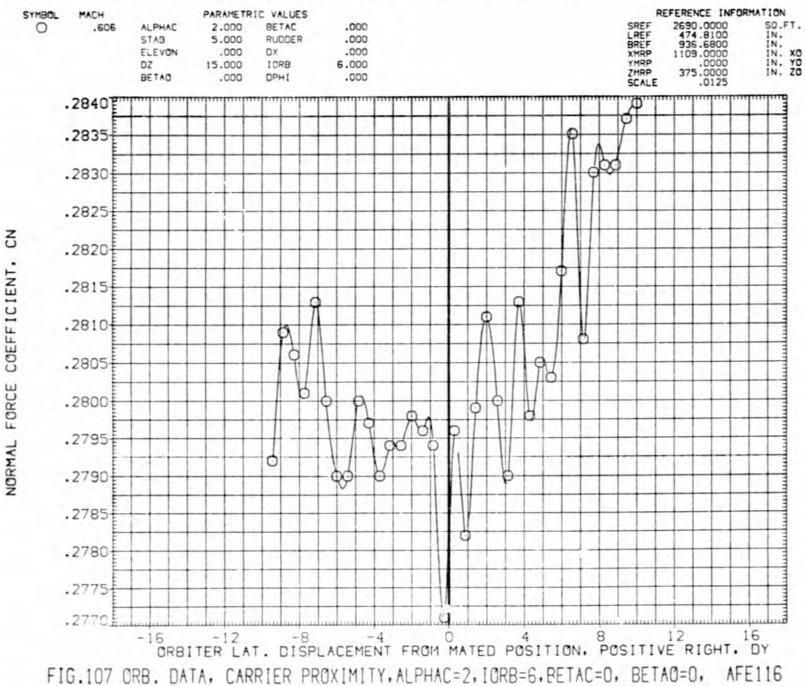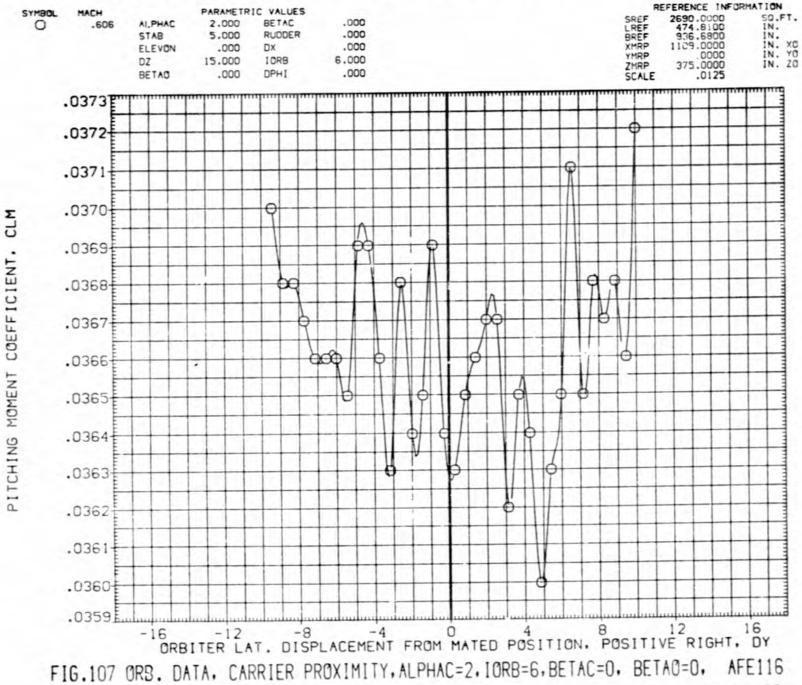
LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE115)

FIG.106 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE115

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE115)

FIG.106 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE115

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE115)

FIG.106 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE115

FIG.106 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE115
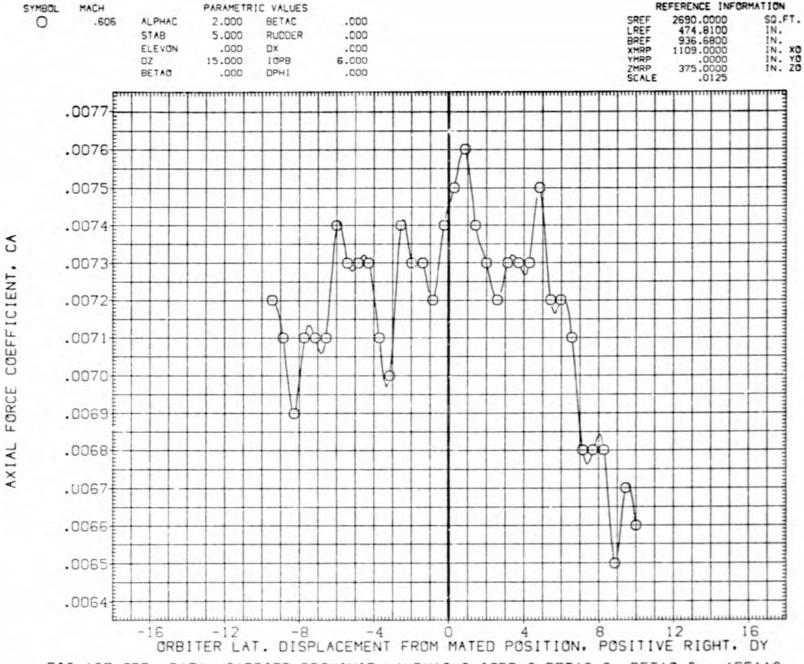
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE115)

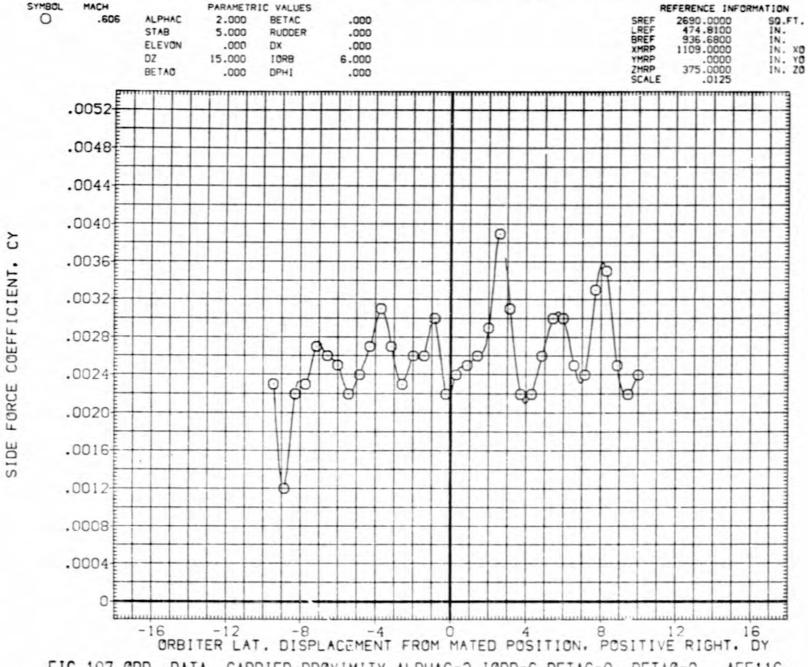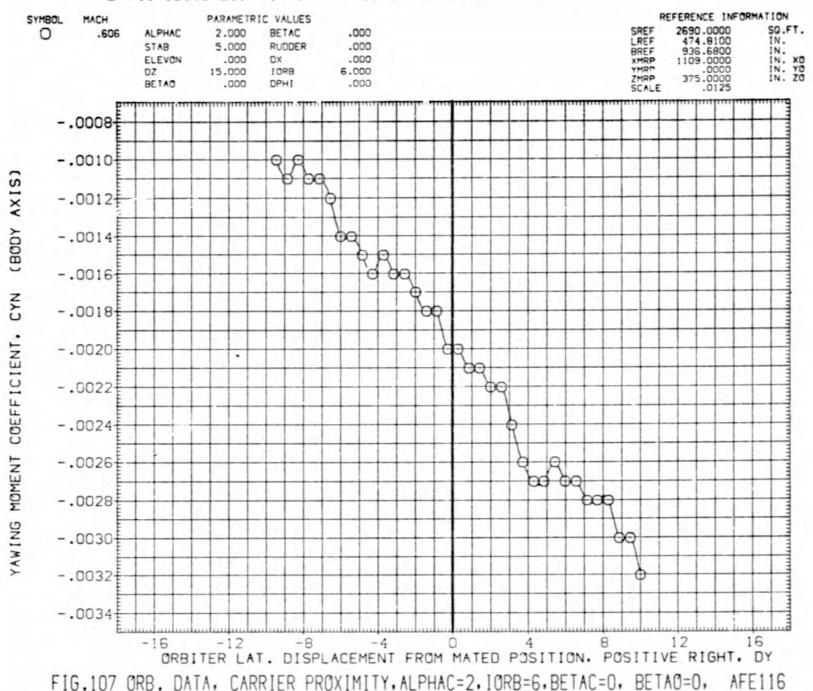ORBITER LAT. DISPLACEMENT FROM MATED POSITION, POSITIVE RIGHT, DY

FIG.106 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, AFE115
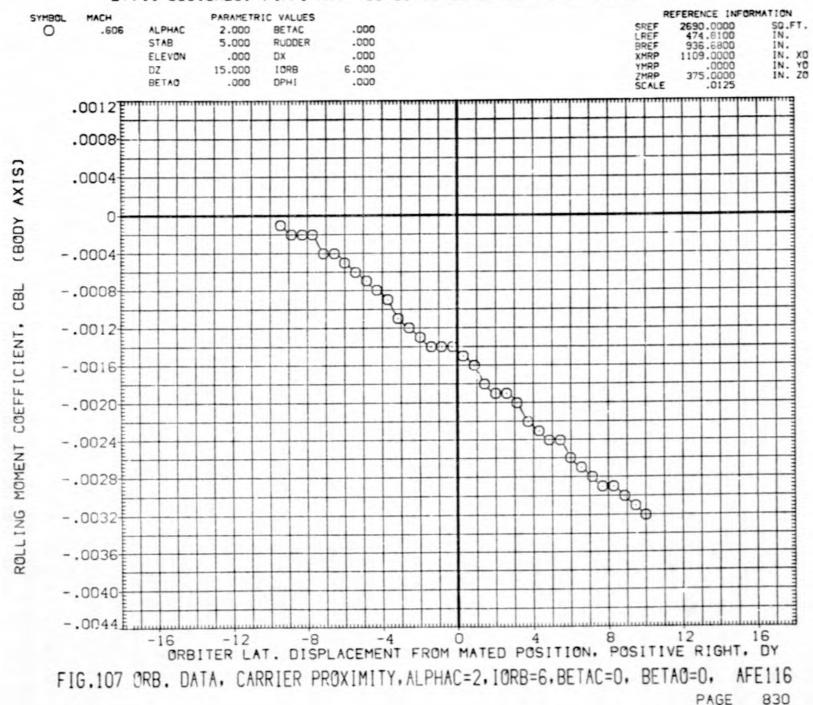
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE115)

FIG.106 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE115

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE116)

FIG.107 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE116

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE116)

FIG.107 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE116
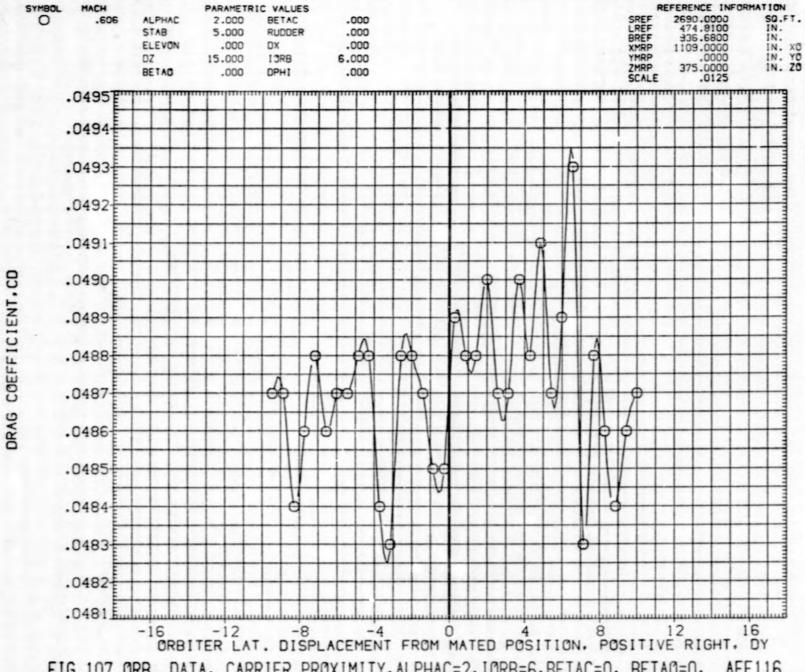
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE116)

FIG.107 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE116

LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE116)

FIG.107 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE116

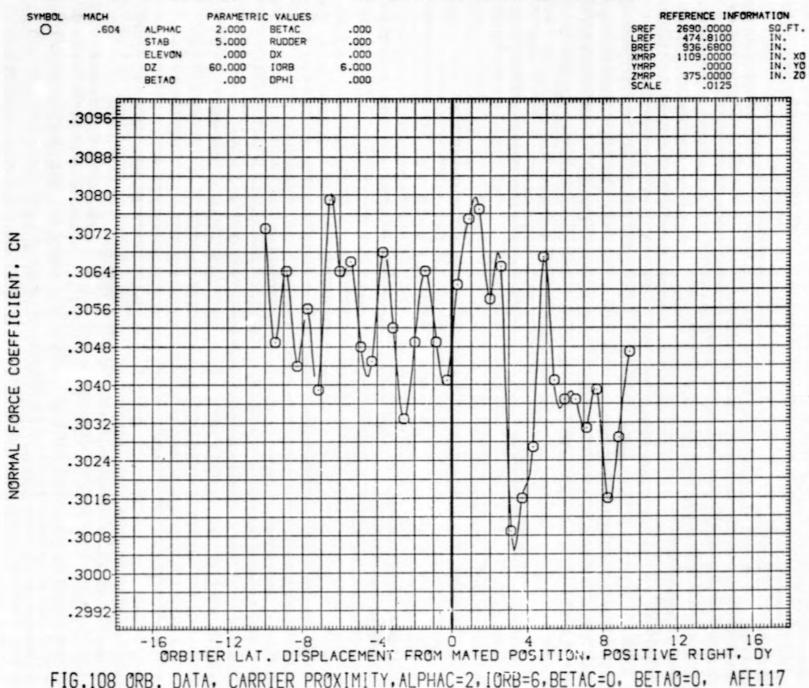PAGE 828

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE116)

FIG.107 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE116
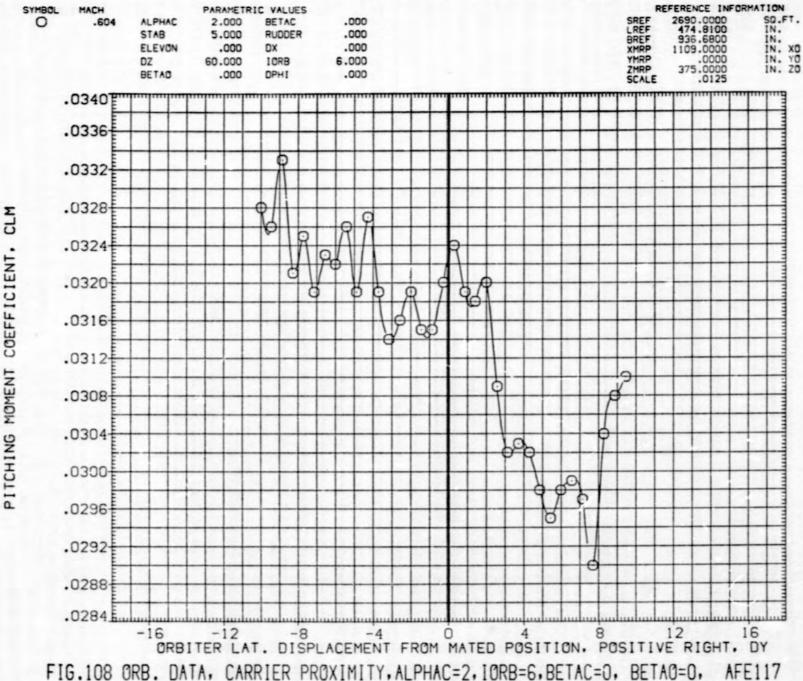
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE116)

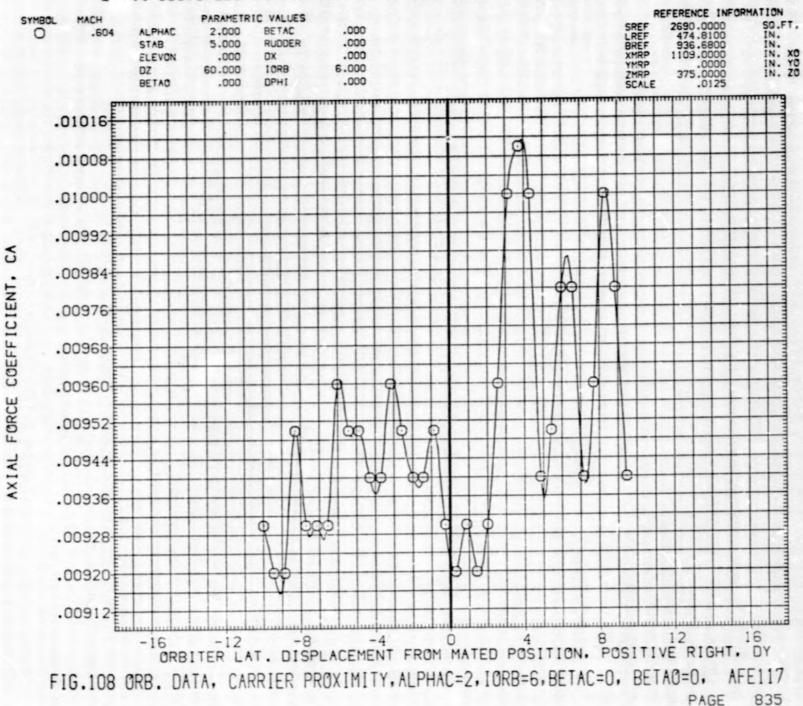FIG.107 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETA0=0, AFE116

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE116)

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.606	ALPHAC	2.000	BETAC	.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	RUDDER	.000	LREF	474.8100	IN.
		ELEVON	.000	DX	.000	BREF	936.6800	IN.
		DZ	15.000	IORB	6.000	XMRP	1109.0000	IN. XO
		BETAO	.000	DPHI	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

LIFT COEFFICIENT, CL

ORBITER LAT. DISPLACEMENT FROM MATED POSITION, POSITIVE RIGHT, DY

FIG.107 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE116

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE116)

ORBITER LAT. DISPLACEMENT FROM MATED POSITION, POSITIVE RIGHT, DY

FIG.107 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETA0=0, AFE116

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LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE117)

FIG.108 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE117

FIG.108 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE117

LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE117)

FIG.108 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE117

FIG.108 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE117

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE117)

FIG.108 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE117

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE117)

FIG.108 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE117

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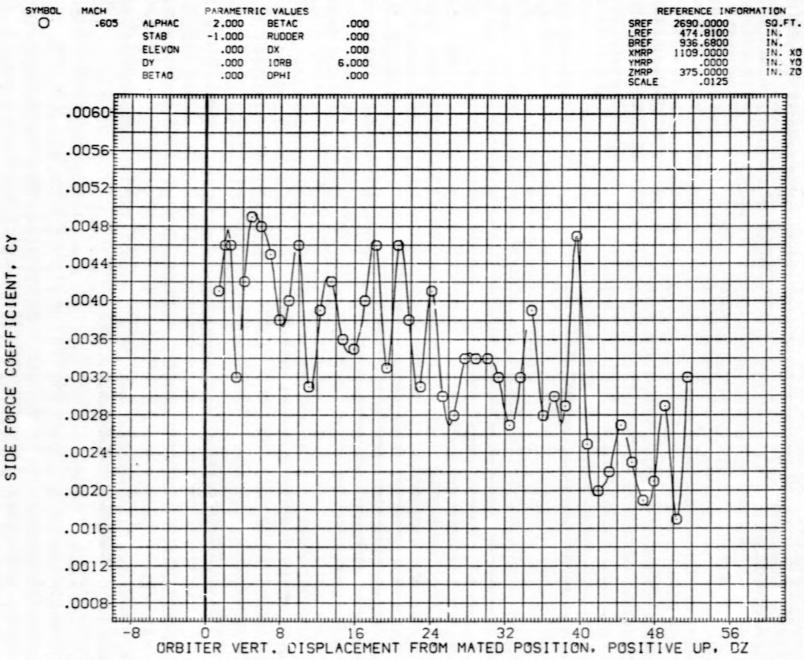# LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE117)

FIG.108 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE117

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE117)
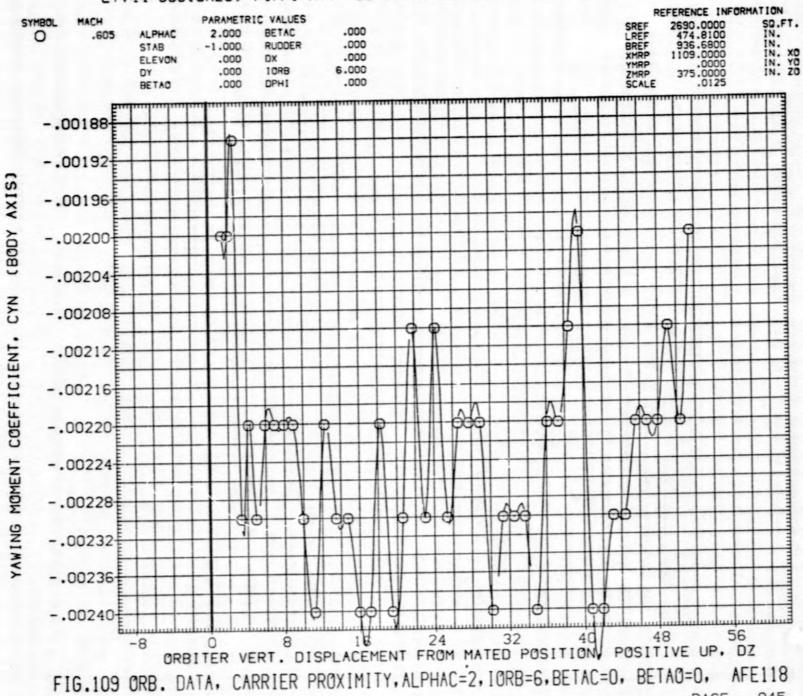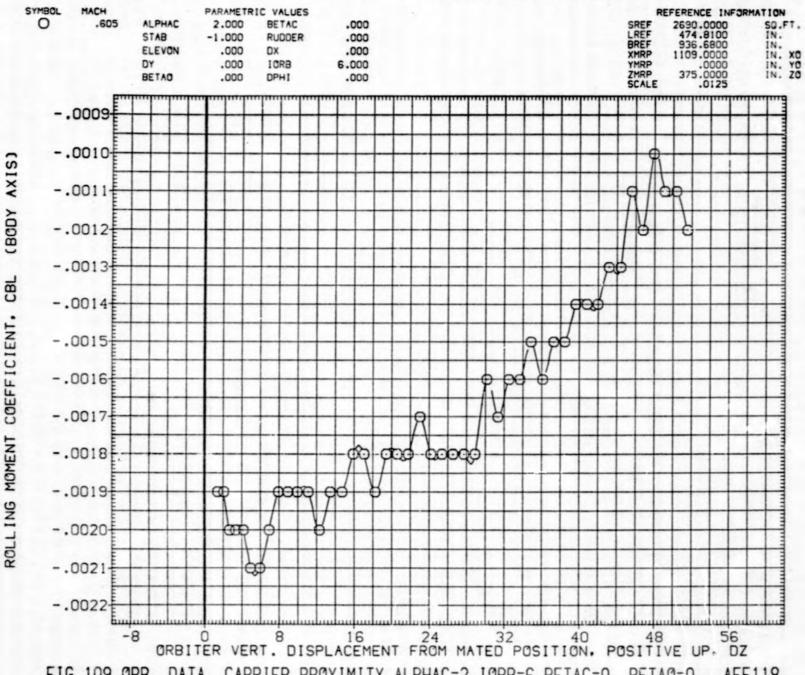
FIG.108 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE117

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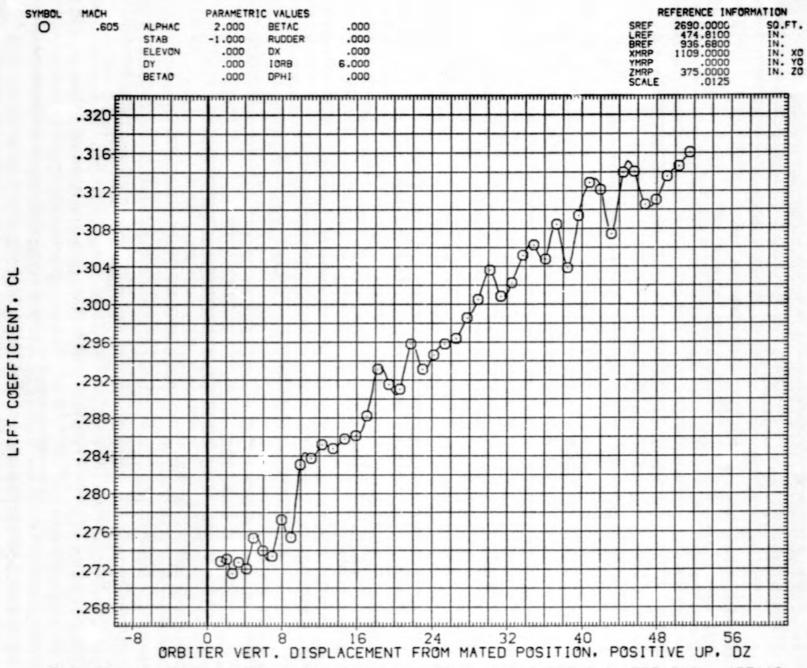
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE118)

SYMBOL   MACH   PARAMETRIC VALUES   REFERENCE INFORMATION
  O   .605   ALPHAC   2.000   BETAC   .000   SREF   2690.0000   SQ.FT.
                   STAB   -1.000   RUDDER   .000   LREF   474.8100   IN.
                   ELEVON   .000   DX   .000   BREF   936.6800   IN.
                   DY   .000   IORB   6.000   XMRP   1109.0000   IN. XO
                   BETAO   .000   DPHI   .000   YMRP   .0000   IN. YO
                                                             ZMRP   375.0000   IN. ZO
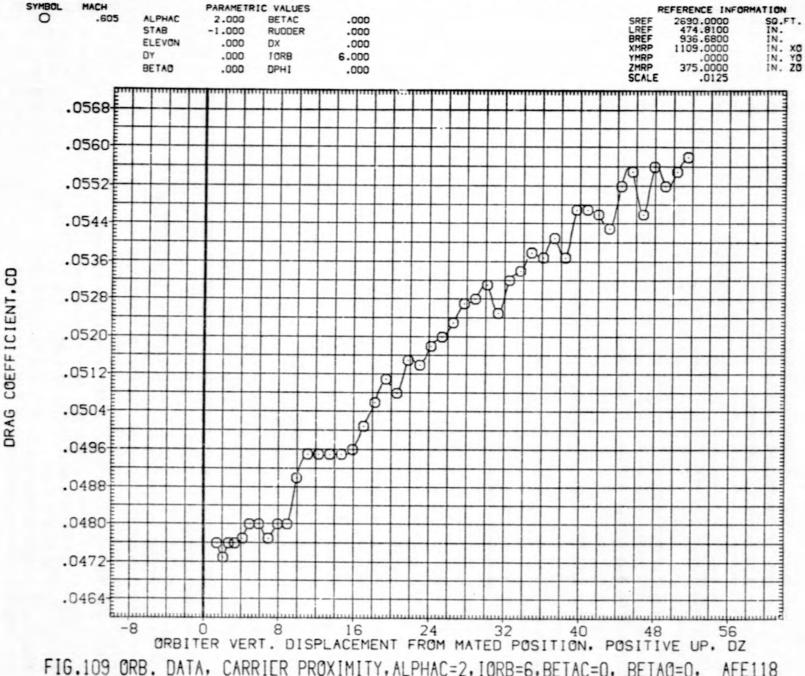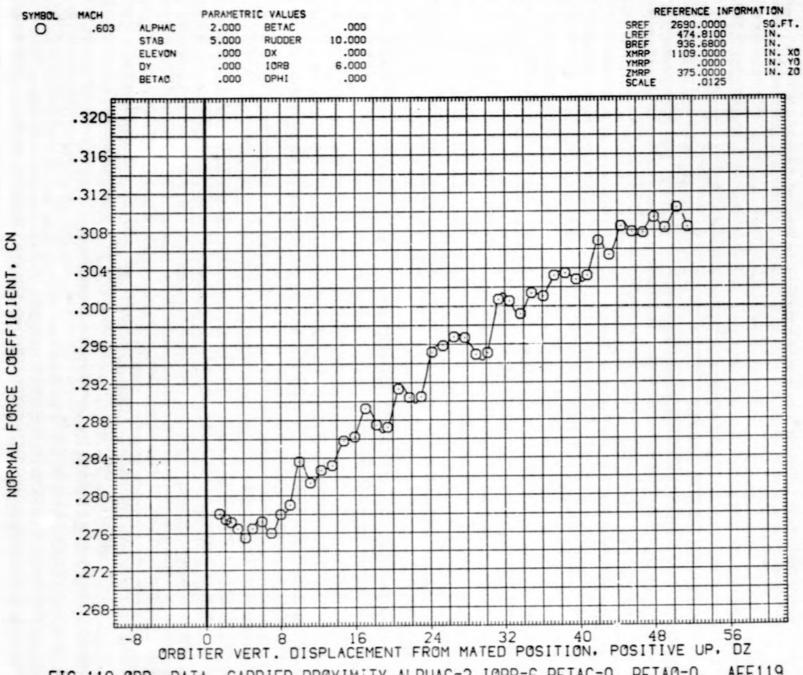   SCALE   .0125

FIG.109 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE118

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SYMBOL   MACH   PARAMETRIC VALUES   REFERENCE INFORMATION

O   .605   ALPHAC   2.000   BETAC   .000   SREF   2690.0000   SQ.FT.
                  STAB   -1.000   RUDDER   .000   LREF   474.8100   IN.
                  ELEVON   .000   DX   .000   BREF   936.6800   IN.
                  DY   .000   IORB   6.000   XMRP   1109.0000   IN. XO
                  BETAO   .000   DPHI   .000   YMRP   .0000   IN. YO
                                                                      ZMRP   375.0000   IN. ZO
                                                                      SCALE   .0125

PITCHING MOMENT COEFFICIENT, CLM

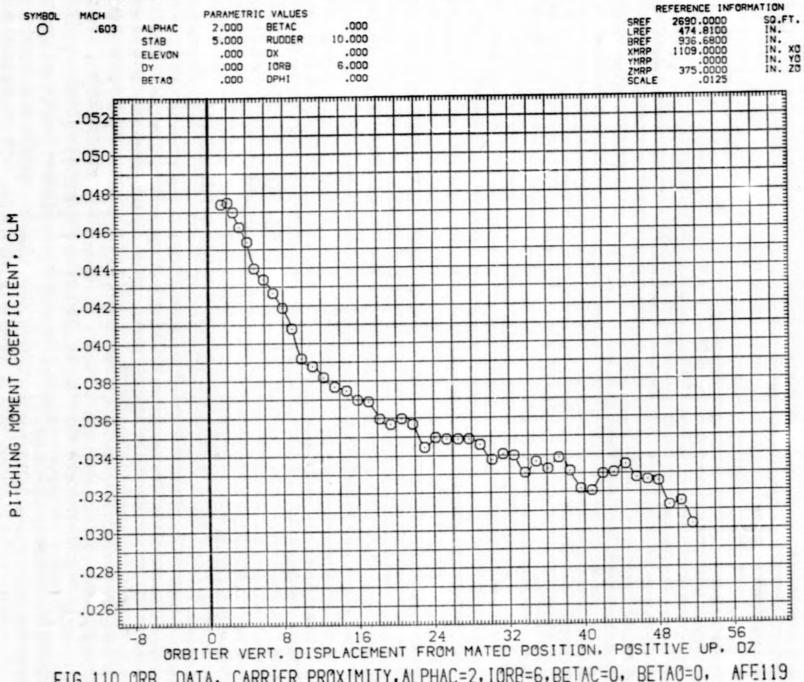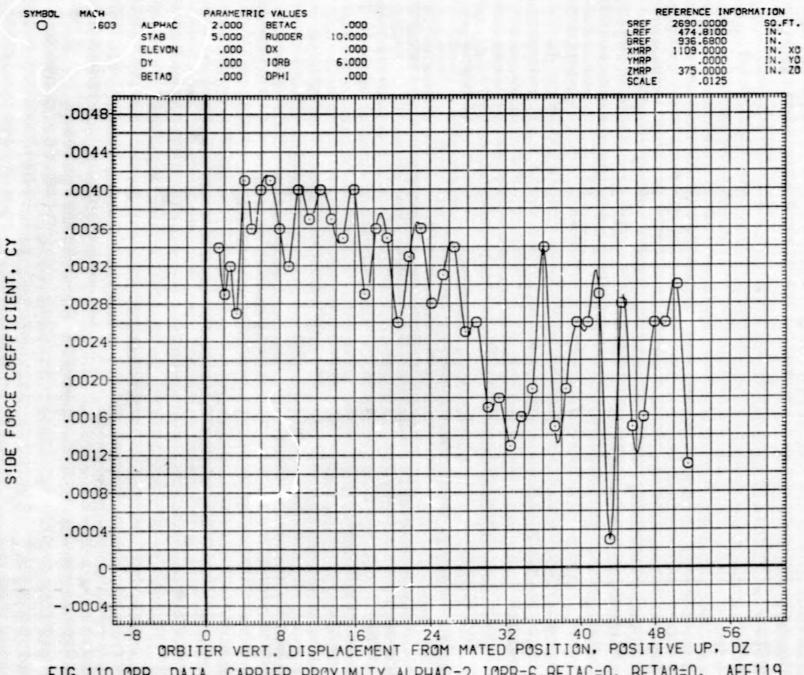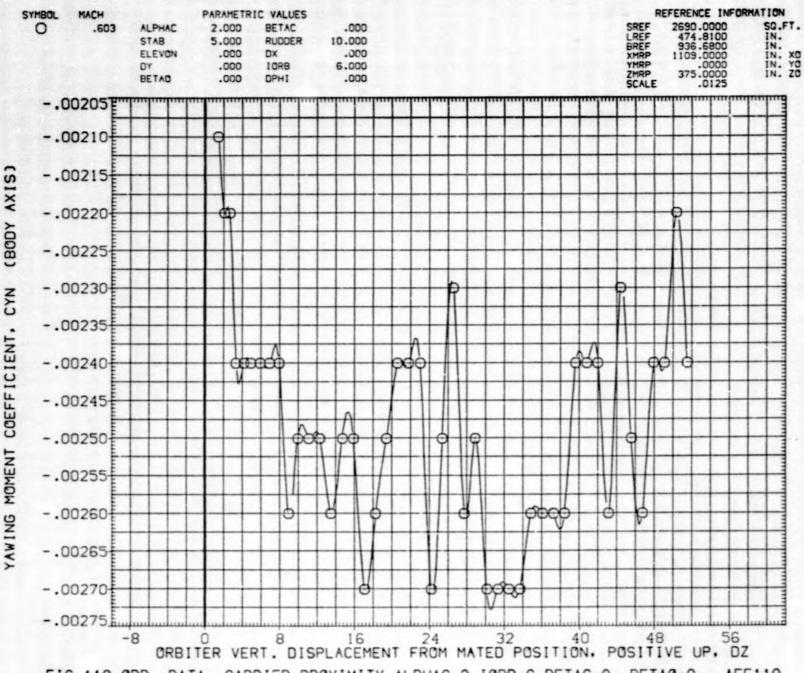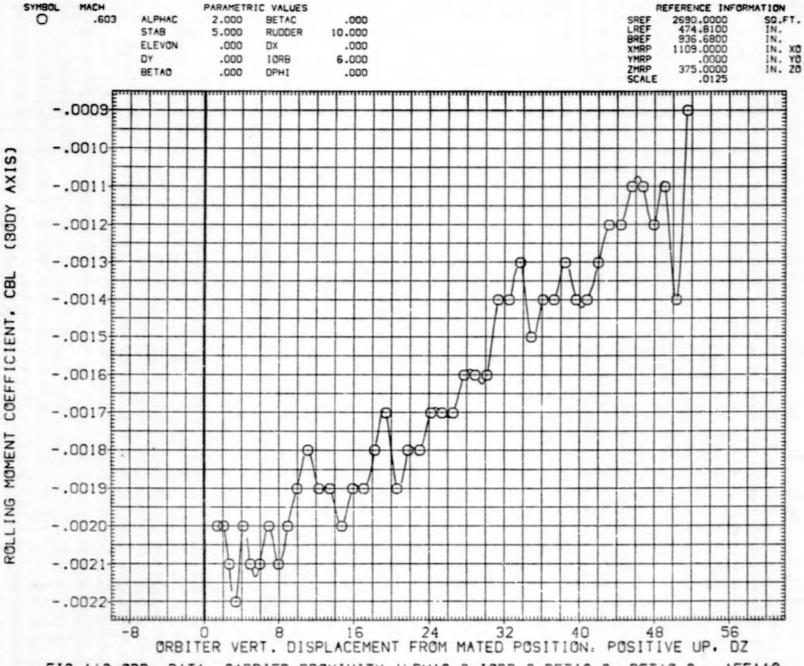ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG.109 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE118

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LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE118)

SYMBOL	MACH		PARAMETRIC VALUES			
O	.605	ALPHAC	2.000	BETAC	.000	
		STAB	-1.000	RUDDER	.000	
		ELEVON	.000	DX	.000	
		DY	.000	IORB	6.000	
		BETAO	.000	DPHI	.000	

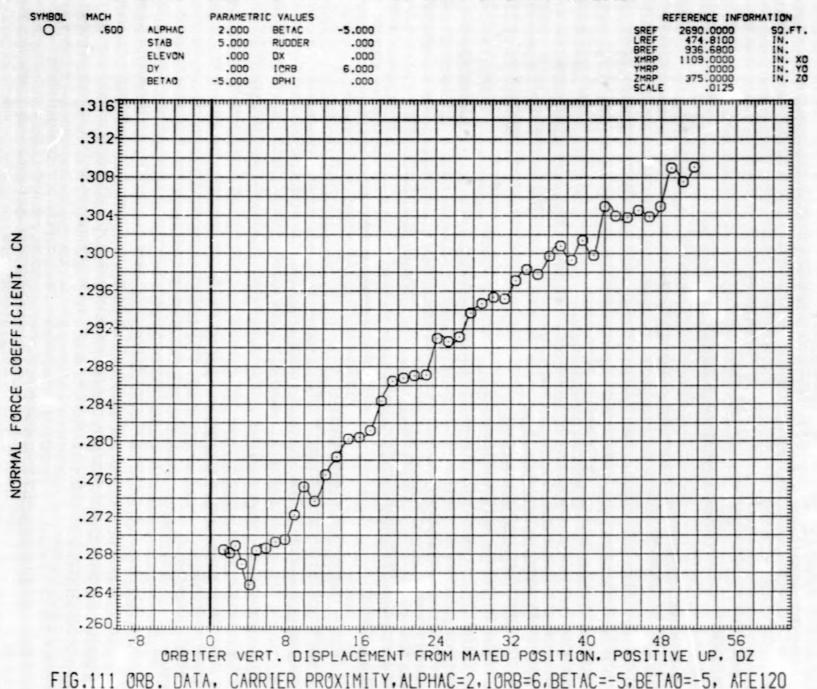FIG.109 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE118

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE118)

FIG.109 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE118

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE118)

FIG.109 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE118

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE118)

FIG.109 ORB. DATA, CARRIER PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETA0=0, AFE118
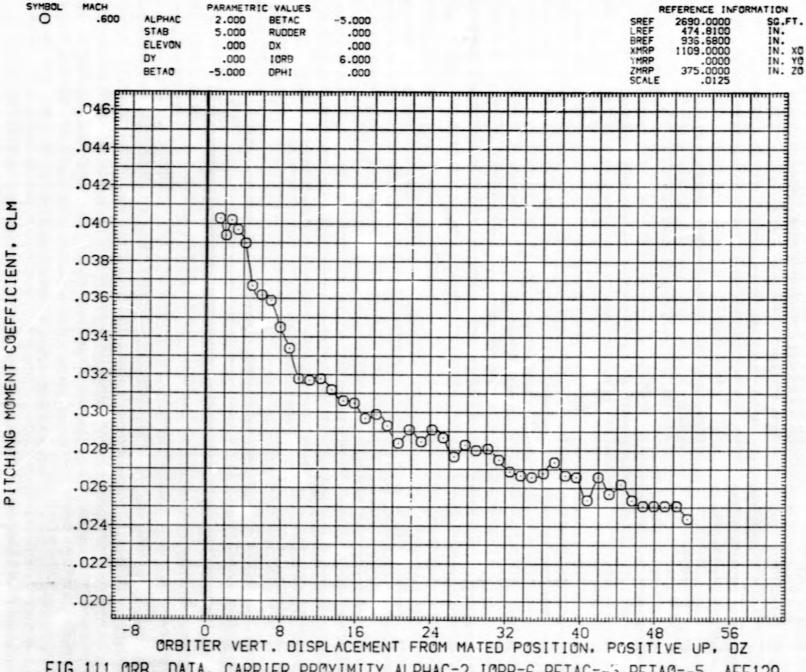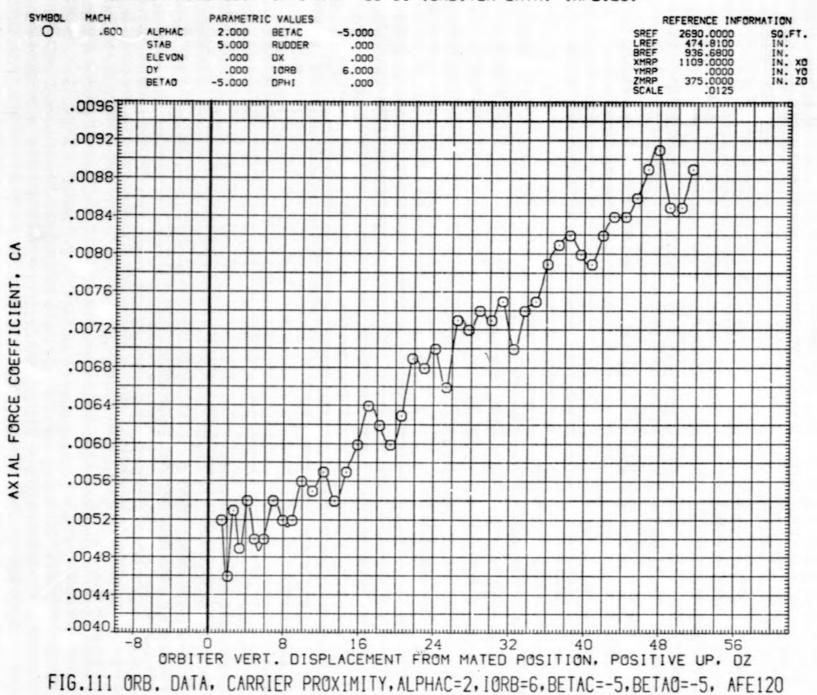
LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE118)

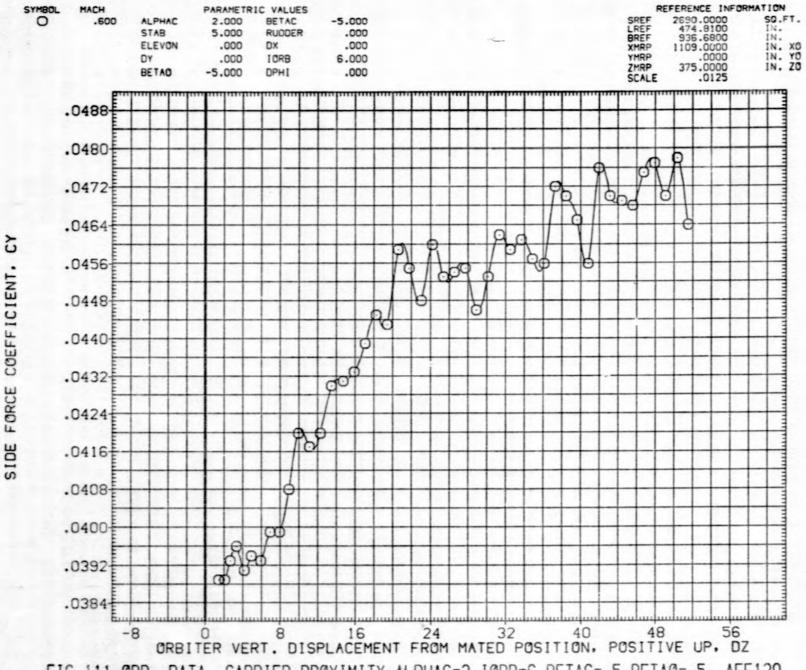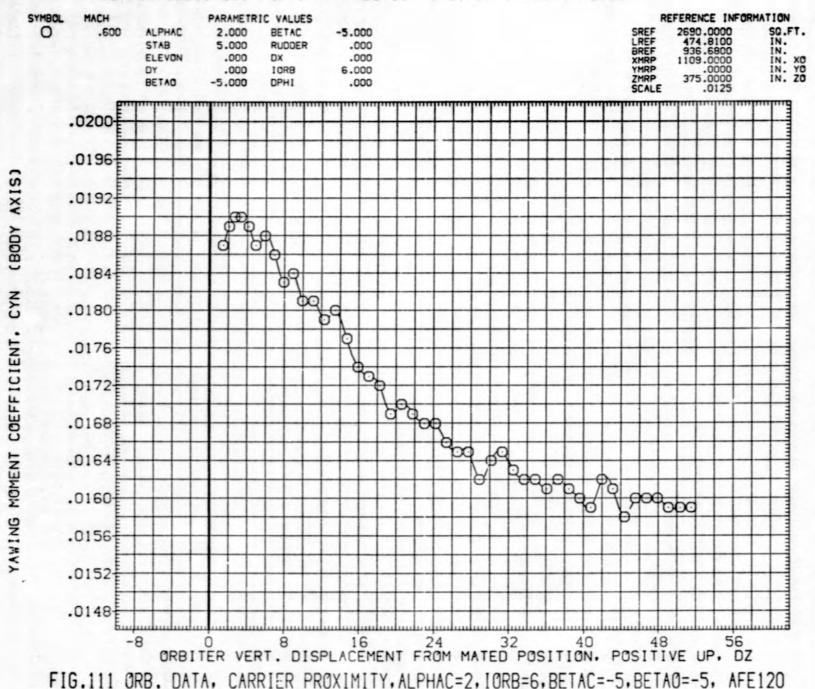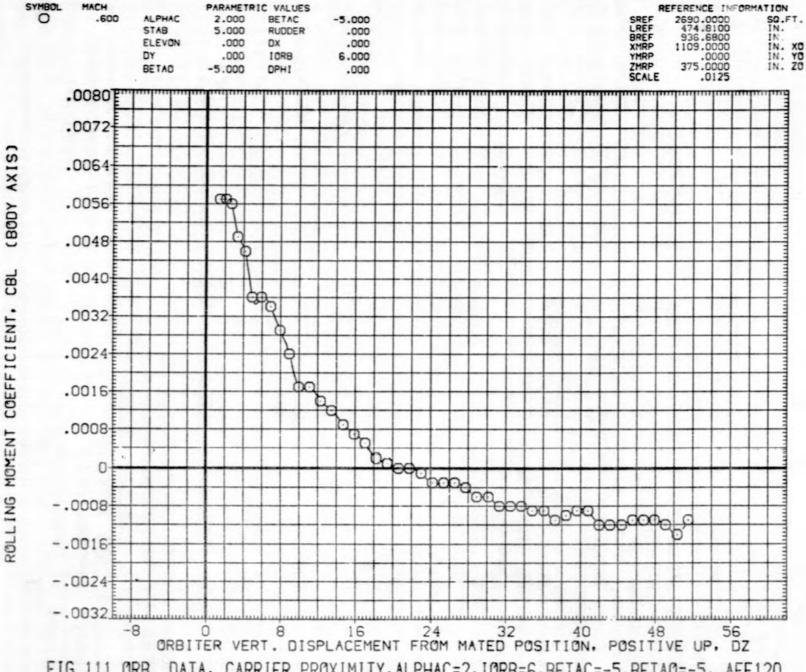| SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.605	ALPHAC	2.000	BETAC	.000	SREF	2690.0000	SQ.FT.
		STAB	-1.000	RUDDER	.000	LREF	474.8100	IN.
		ELEVON	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	6.000	XMRP	1109.0000	IN. XO
		BETAO	.000	DPHI	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

FIG.109 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE118

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE118)

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ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG.109 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE118
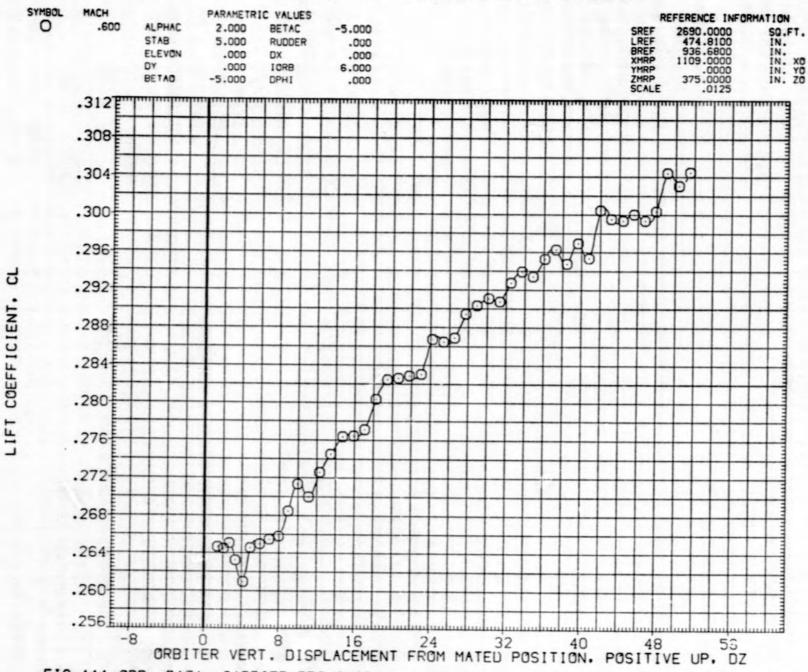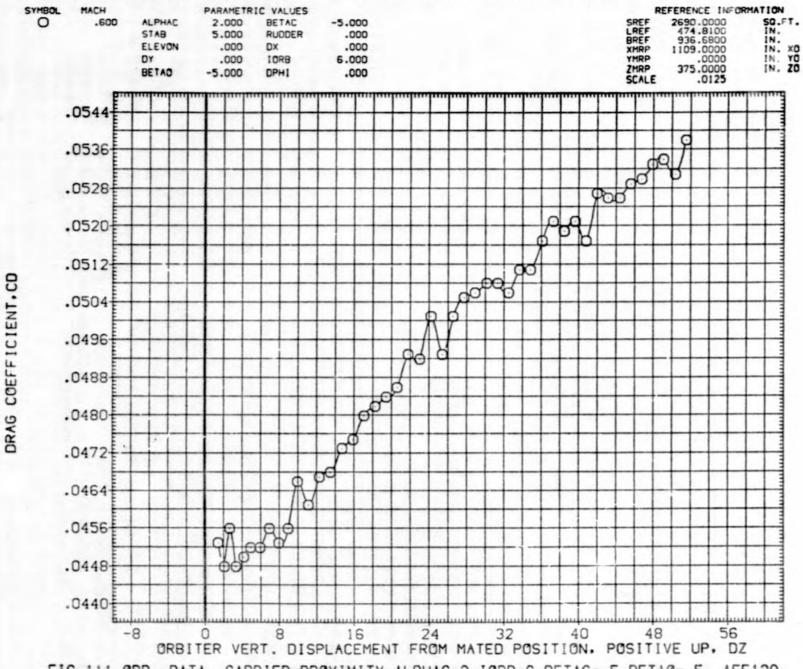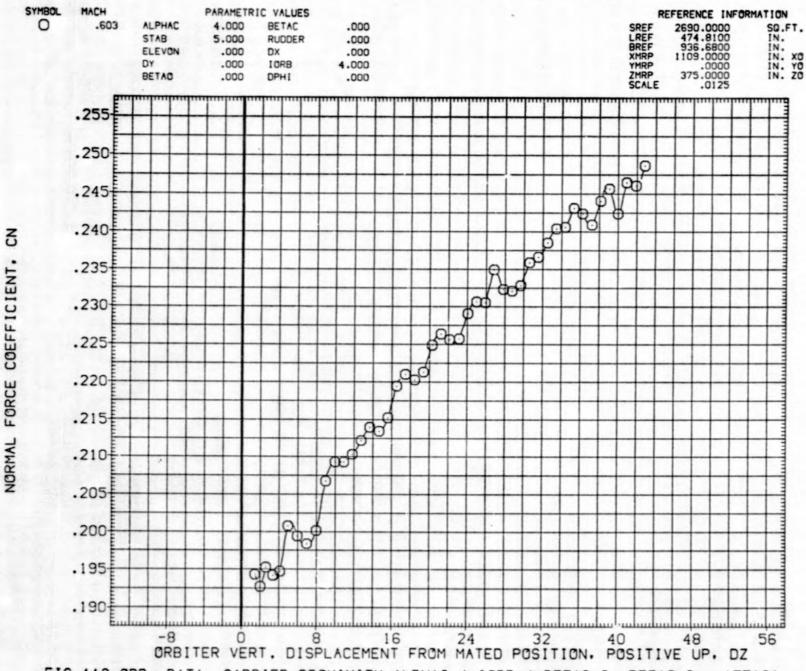
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE119)

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.603	ALPHAC	2.000	BETAC	.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	RUDDER	10.000	LREF	474.8100	IN.
		ELEVON	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	6.000	XMRP	1109.0000	IN. XO
		BETAO	.000	DPHI	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

FIG.110 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE119

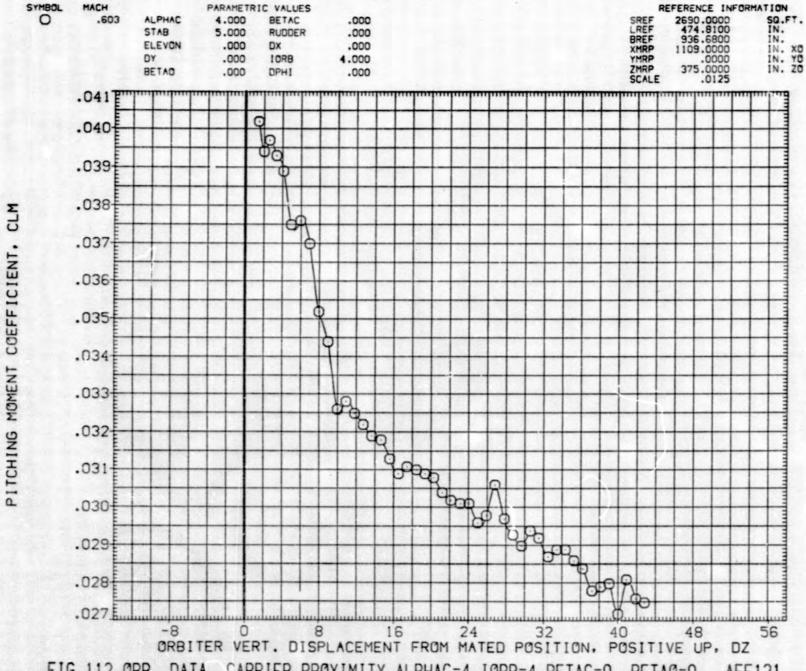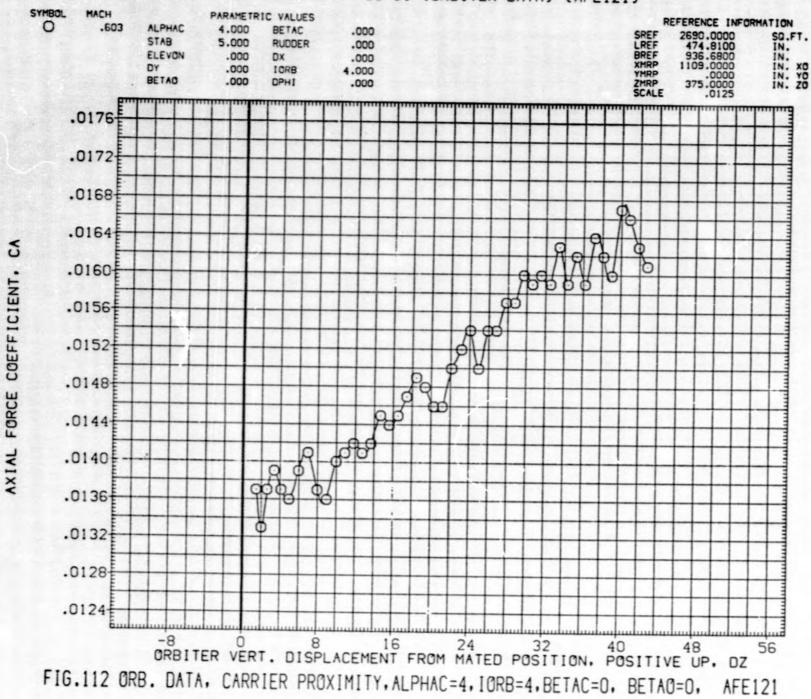FIG.110 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE119

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE119)

FIG.110 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE119
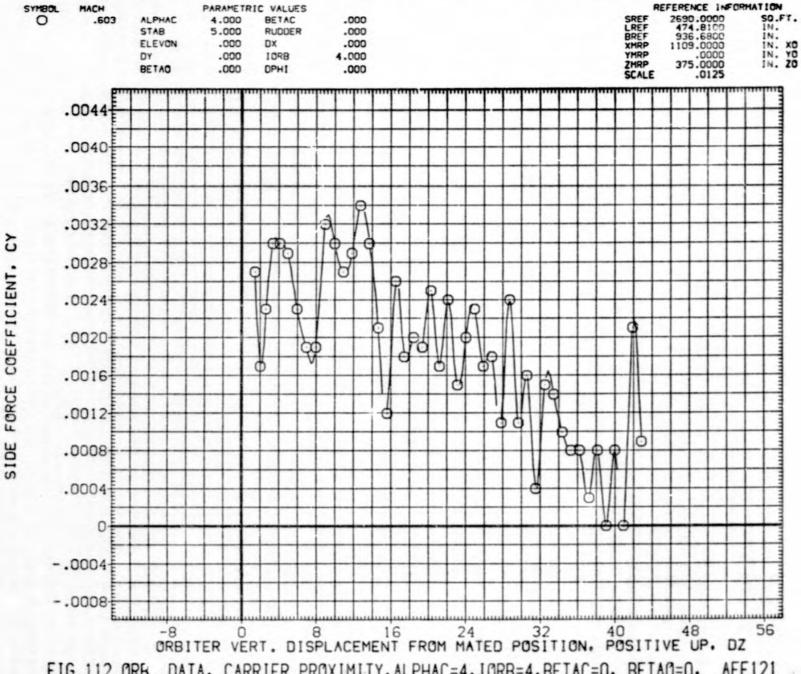
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE119)

FIG.110 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE119
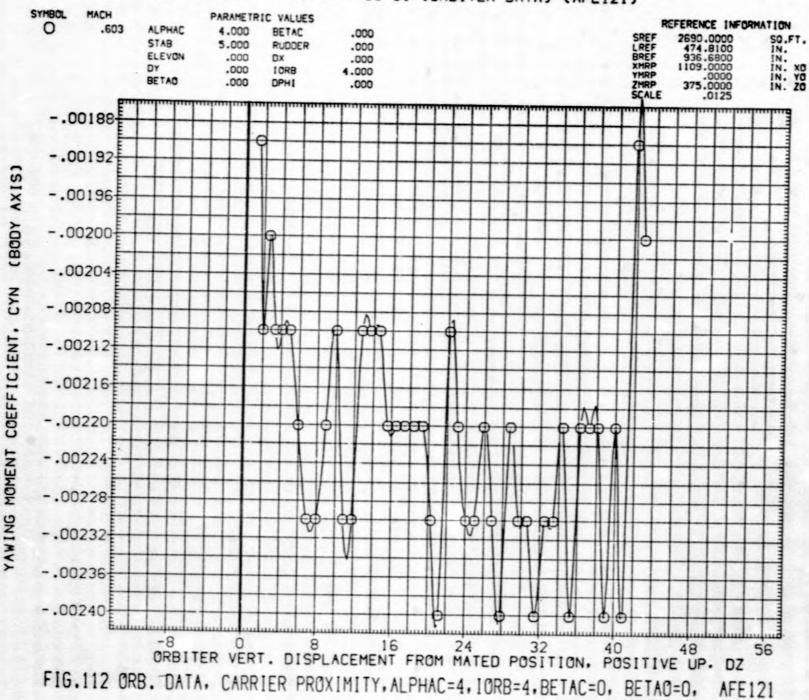
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LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE119)

FIG.110 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE119

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE119)

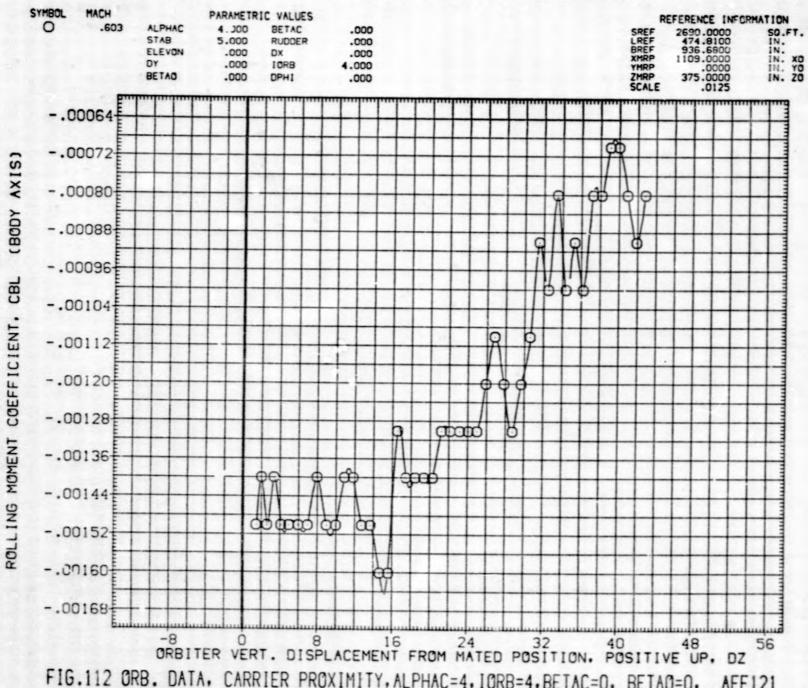FIG.110 ORB. DATA, CARRIER PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETA0=0, AFE119

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FIG.110 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE119
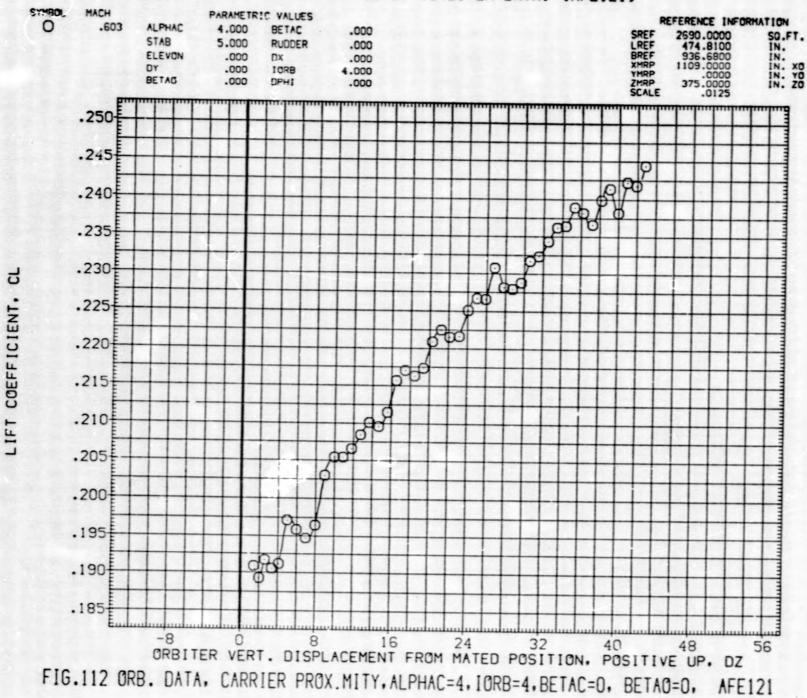
LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE119)

FIG.110 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=0, BETAO=0, AFE119

LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE120)

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.600	ALPHAC	2.000	BETAC	-5.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	RUDDER	.000	LREF	474.8100	IN.
		ELEVON	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	6.000	XMRP	1109.0000	IN. XO
		BETAO	-5.000	DPHI	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

FIG.111 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=-5,BETAO=-5, AFE120
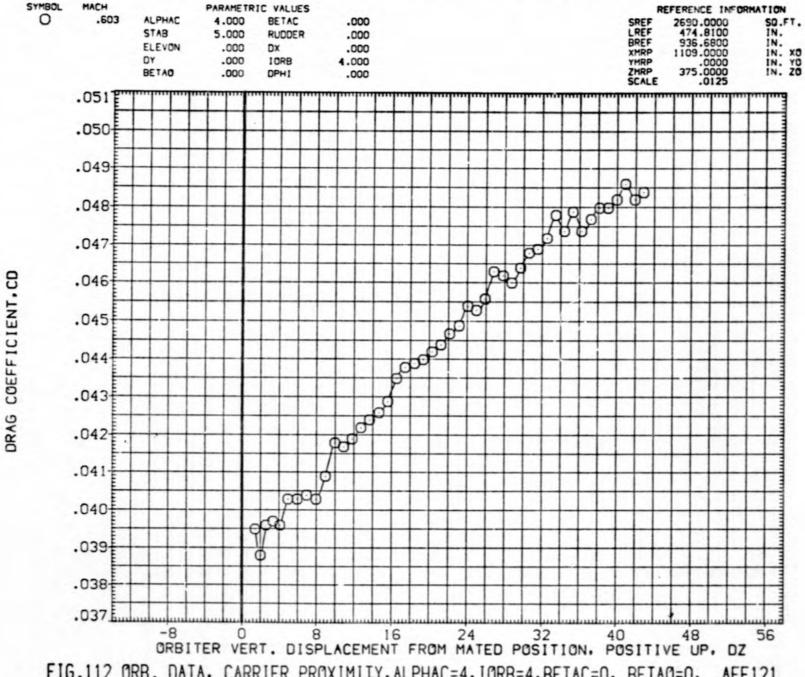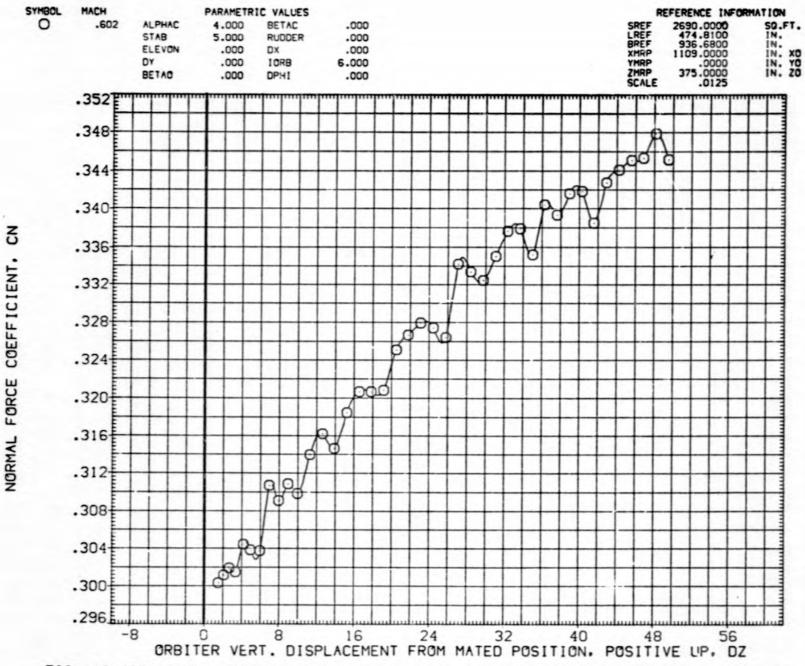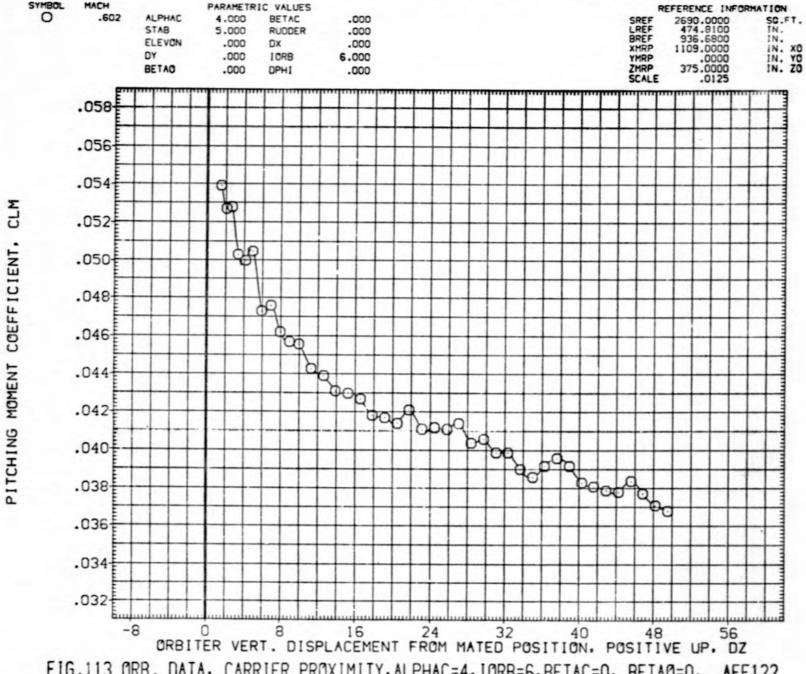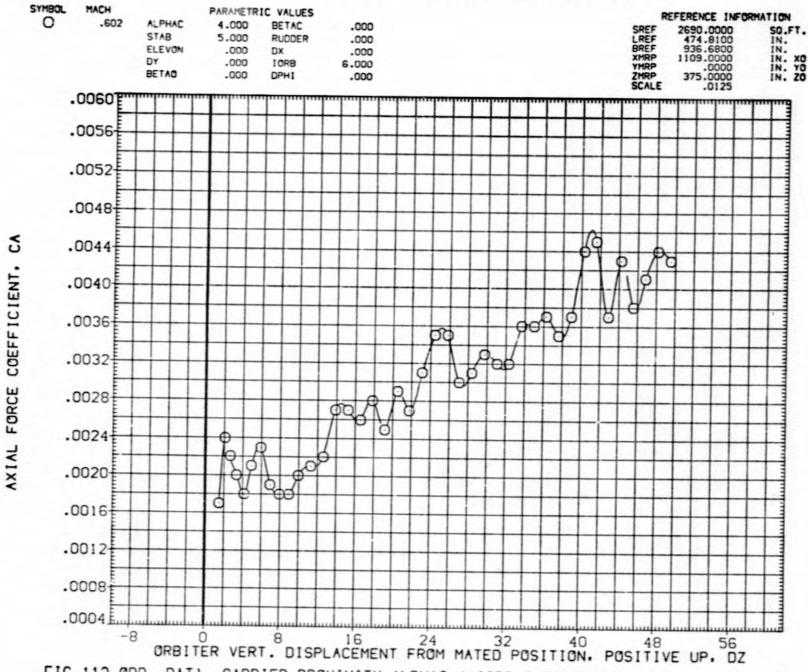
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE120)

FIG.111 ORB. DATA, CARRIER PROXIMITY, ALPHAC=2, IORB=6, BETAC=-5, BETAO=-5, AFE120

LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE120)

SYMBOL	MACH		PARAMETRIC VALUES				
O	.600	ALPHAC	2.000	BETAC	-5.000		
		STAB	5.000	RUDDER	.000		
		ELEVON	.000	DX	.000		
		DY	.000	IORB	6.000		
		BETAO	-5.000	DPHI	.000		

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

FIG.111 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=-5,BETAO=-5, AFE120
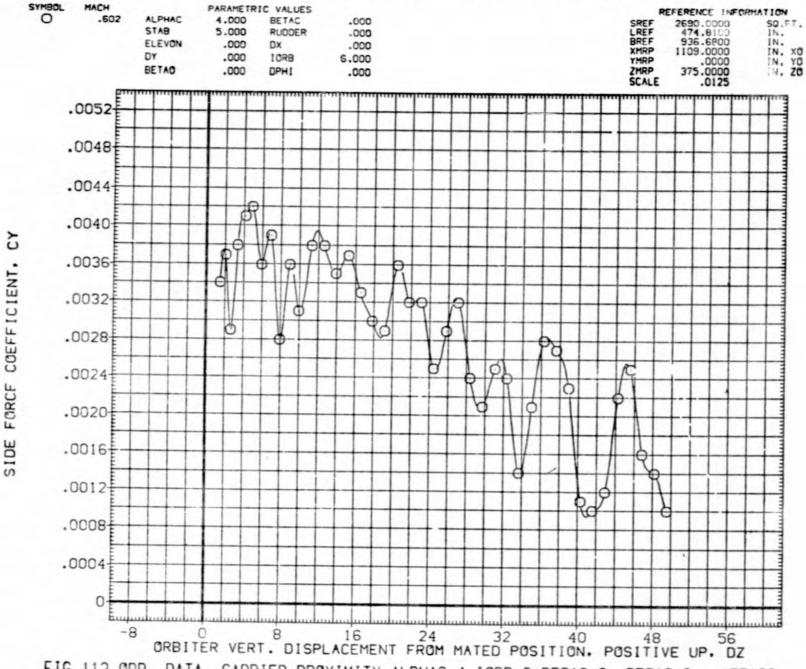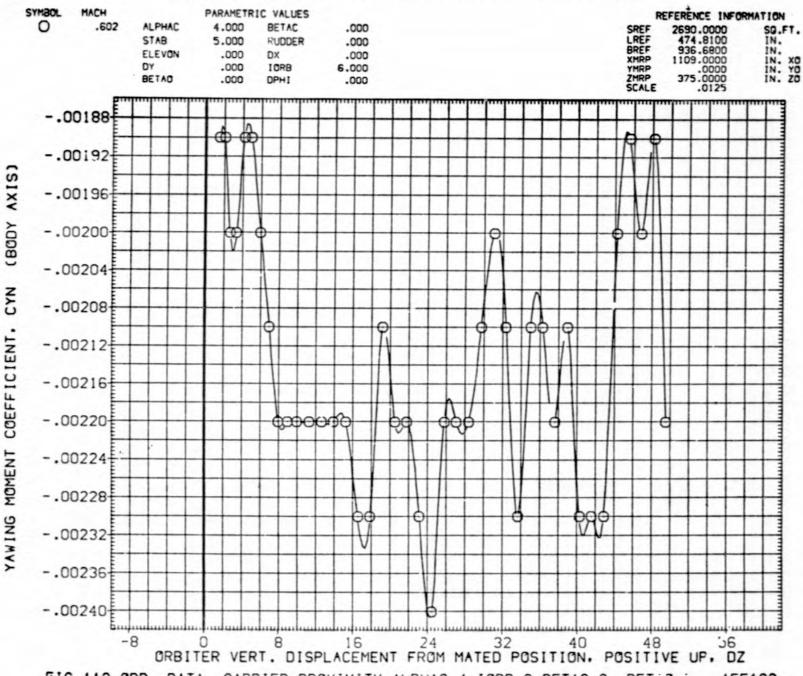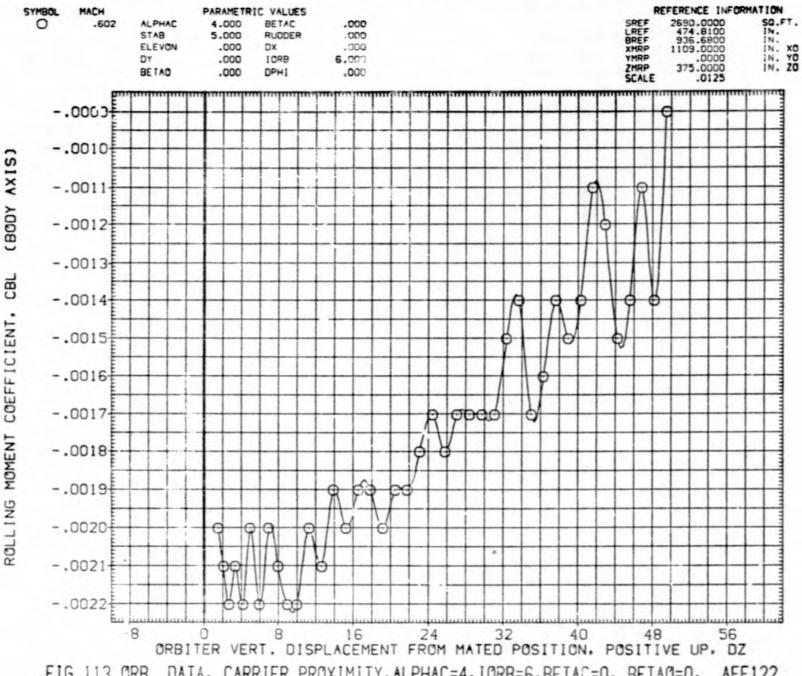
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE120)

FIG.111 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=-5,BETAO=-5, AFE120

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE120)

FIG.111 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=-5,BETAO=-5, AFE120

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE120)

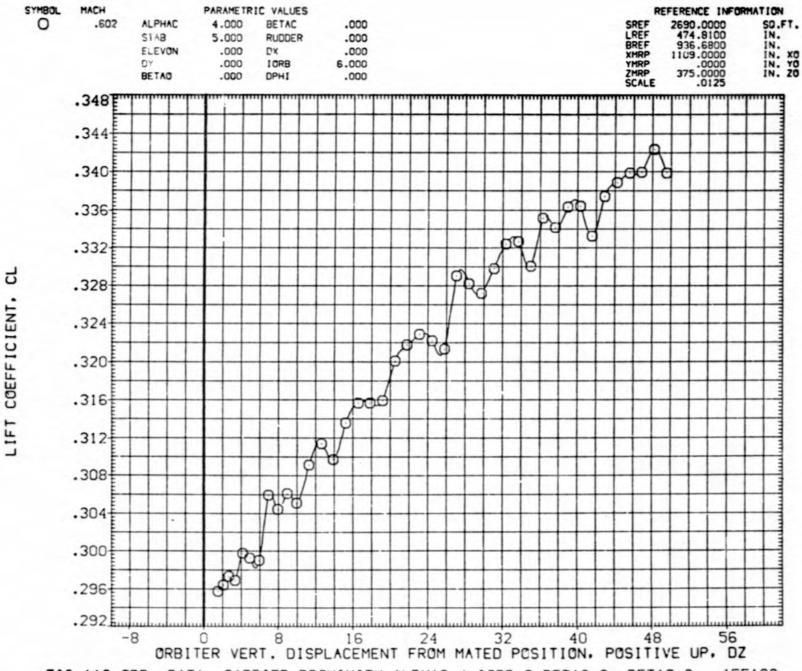| SYMBOL	MACH	PARAMETRIC VALUES			
O	.600	ALPHAC	2.000	BETAC	-5.000
		STAB	5.000	RUDDER	.000
		ELEVON	.000	DX	.000
		DY	.000	IORB	6.000
		BETAO	-5.000	DPHI	.000

REFERENCE INFORMATION
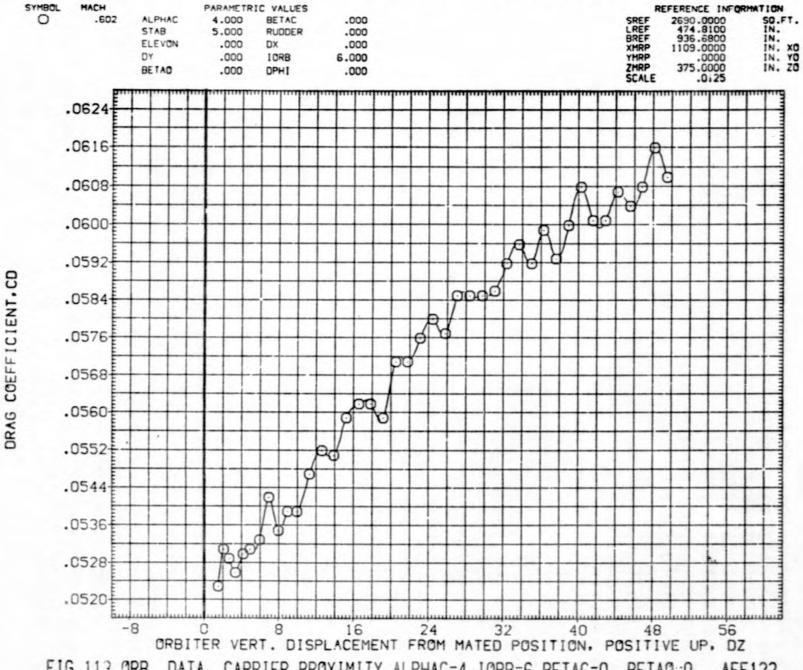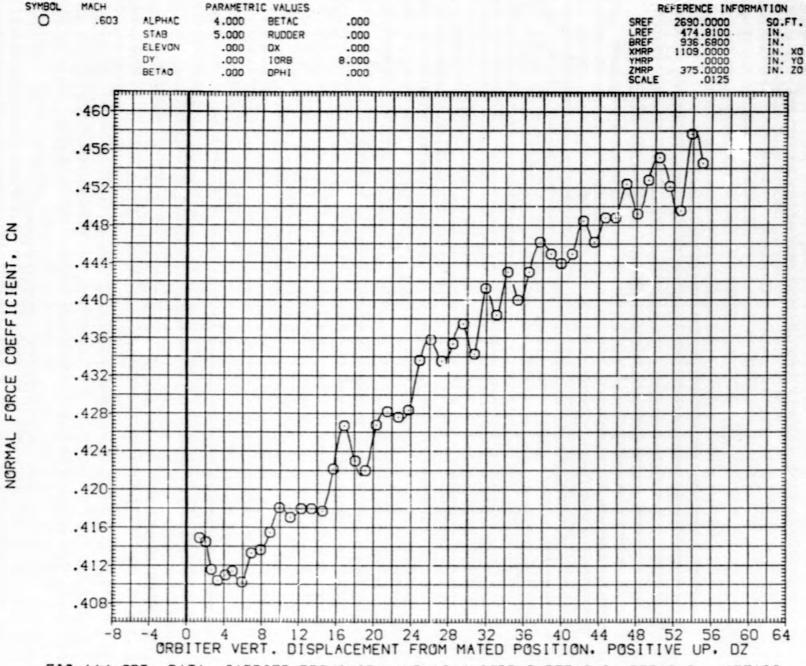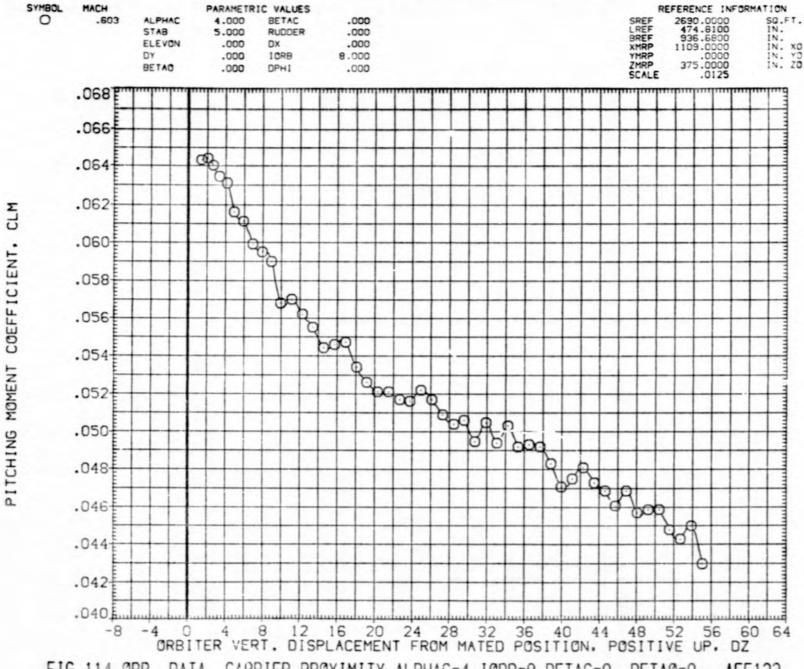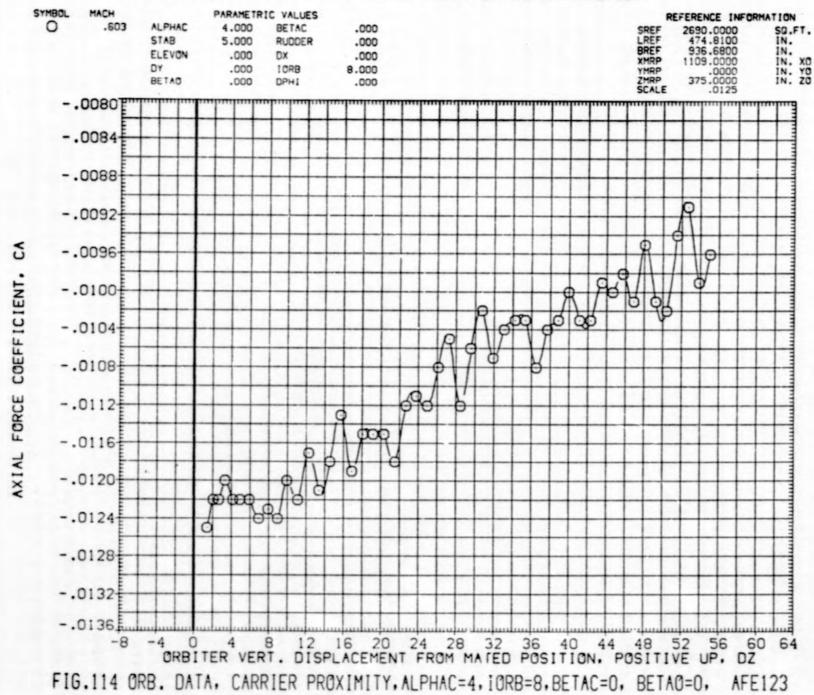|		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

FIG.111 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=-5,BETAO=-5, AFE120

LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE120)

SYMBOL	MACH	PARAMETRIC VALUES			
O	.600	ALPHAC	2.000	BETAC	-5.000
		STAB	5.000	RUDDER	.000
		ELEVON	.000	DX	.000
		DY	.000	IORB	6.000
		BETAO	-5.000	DPHI	.000

REFERENCE INFORMATION
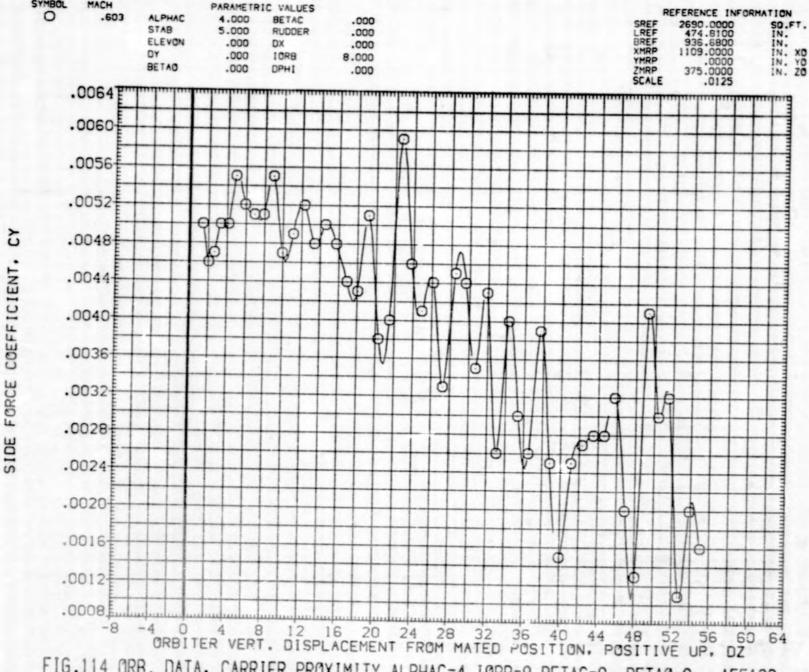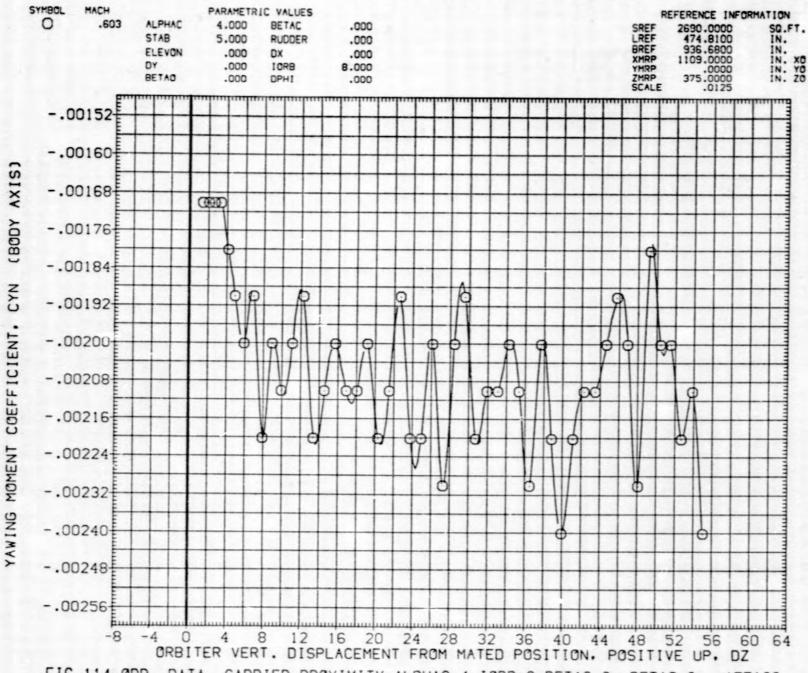| SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

FIG.111 ORB. DATA, CARRIER PROXIMITY, ALPHAC=2, IORB=6, BETAC=-5, BETAO=-5, AFE120

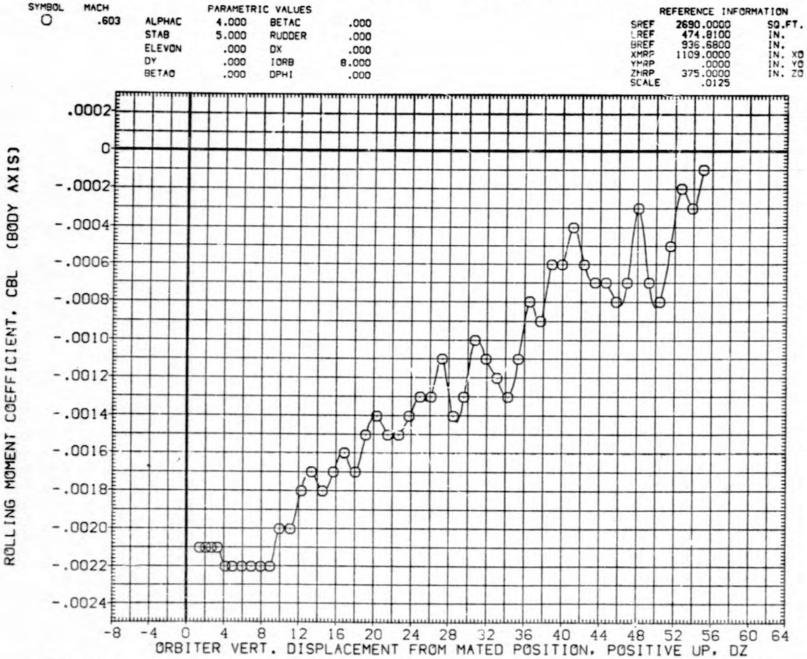PAGE   863

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE120)

FIG.111 ORB. DATA, CARRIER PROXIMITY,ALPHAC=2,IORB=6,BETAC=-5,BETAO=-5, AFE120

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE121)

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.603	ALPHAC	4.000	BETAC	.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	RUDDER	.000	LREF	474.8100	IN.
		ELEVON	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	4.000	XMRP	1109.0000	IN. XO
		BETAO	.000	DPHI	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

FIG.112 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=4,BETAC=0, BETAO=0, AFE121
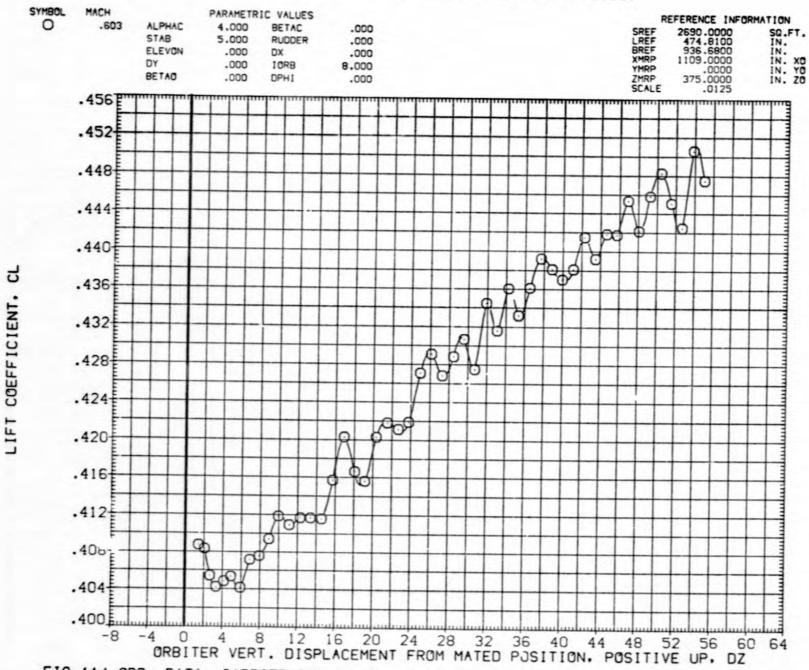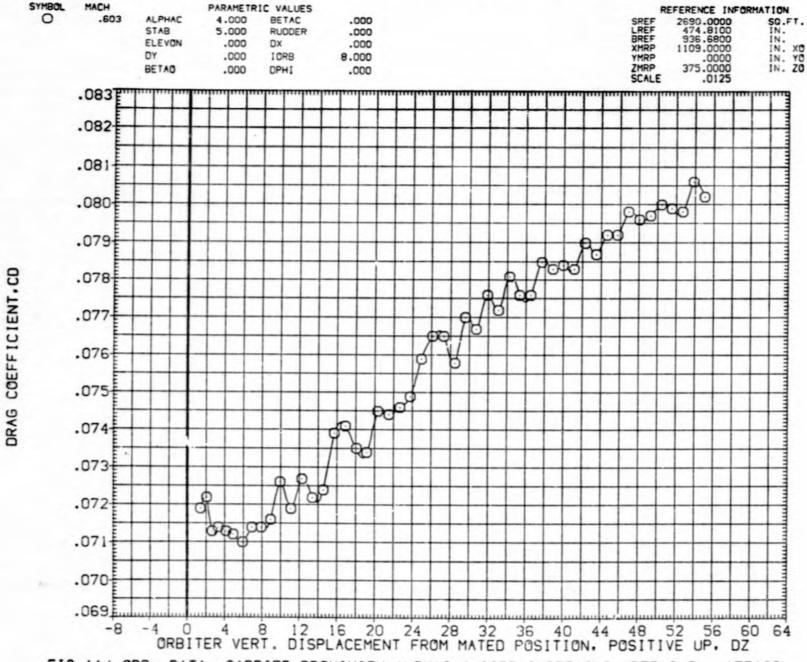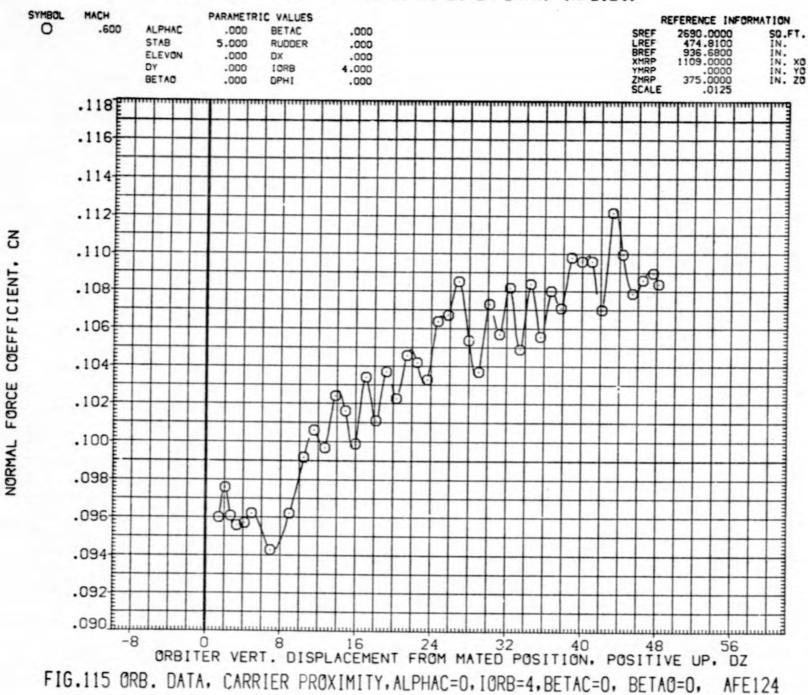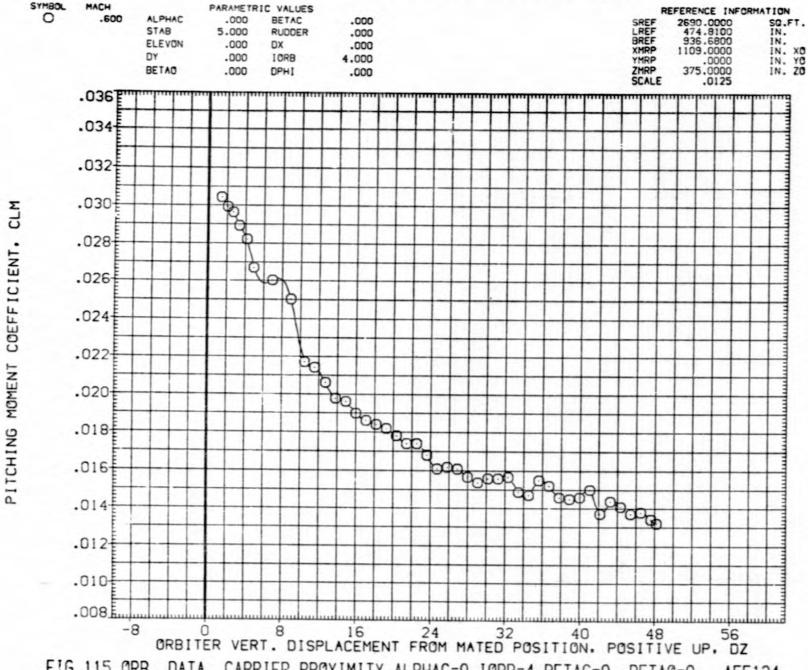
FIG.112 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=0, BETAO=0, AFE121

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE121)

SYMBOL	MACH		PARAMETRIC VALUES				
O	.603	ALPHAC	4.000	BETAC	.000		
		STAB	5.000	RUDDER	.000		
		ELEVON	.000	DX	.000		
		DY	.000	IORB	4.000		
		BETAO	.000	DPHI	.000		

REFERENCE INFORMATION

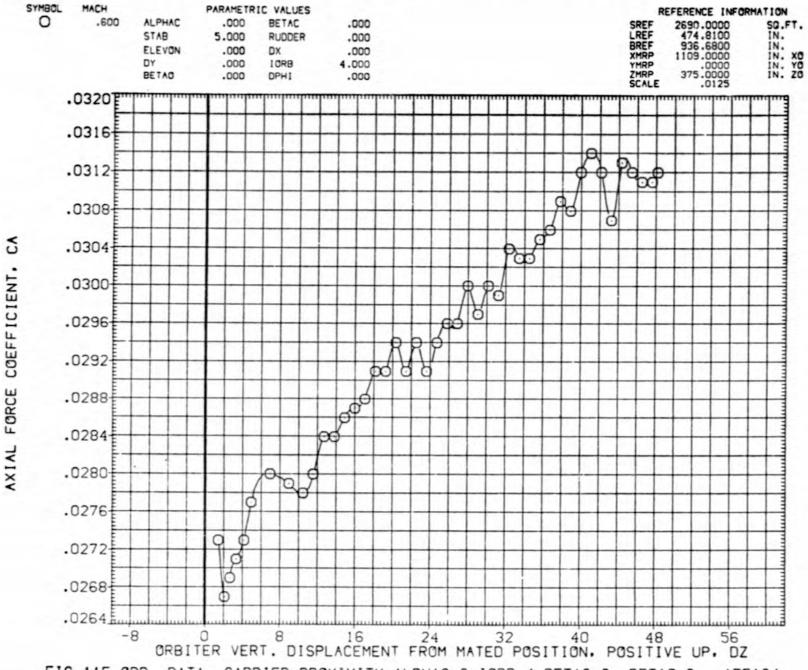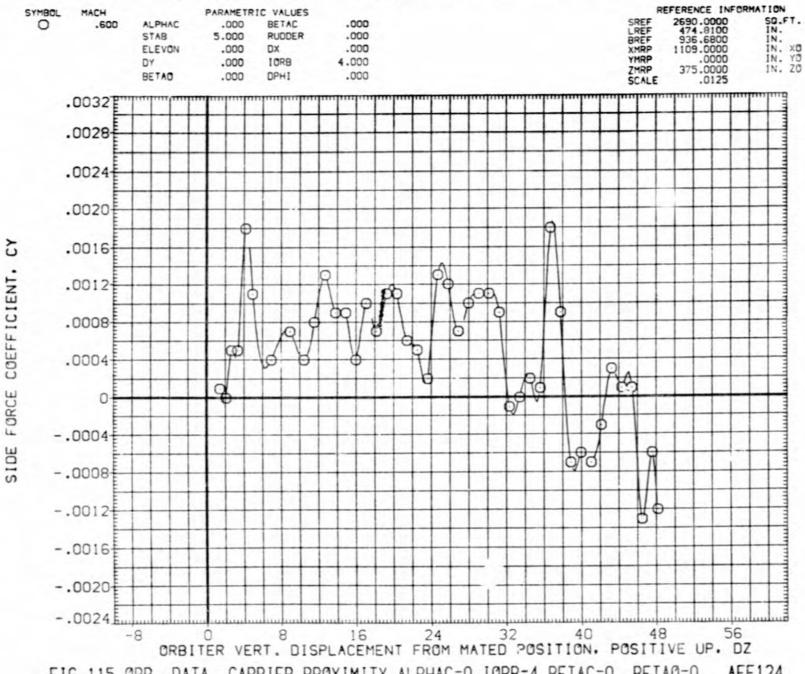| SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

FIG.112 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=4,BETAC=0, BETAO=0, AFE121

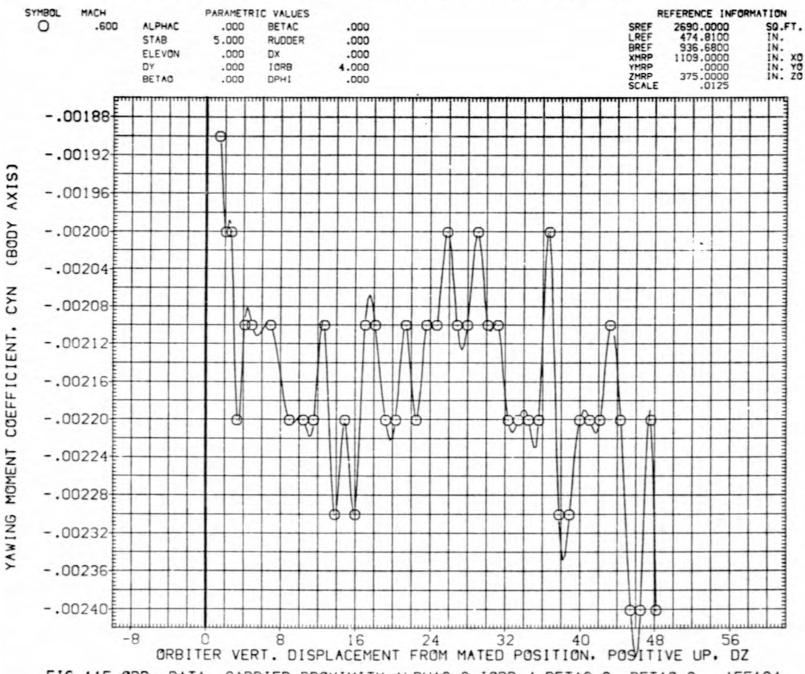LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE121)

FIG.112 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=4,BETAC=0, BETAO=0, AFE121

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE121)

FIG.112 ORB. DATA, CARRIER PROXIMITY, ALPHAC=4, IORB=4, BETAC=0, BETAO=0, AFE121

FIG.112 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=4,BETAC=0, BETAO=0, AFE121

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE121)

FIG.112 ORB. DATA, CARRIER PROX.MITY,ALPHAC=4,IORB=4,BETAC=0, BETAO=0, AFE121

FIG.112 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=4,BETAC=0, BETAO=0, AFE121

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE122)

FIG.113 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE122

FIG.113 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE122

L1V44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE122)

FIG.113 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE122

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE122)

FIG.113 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE122
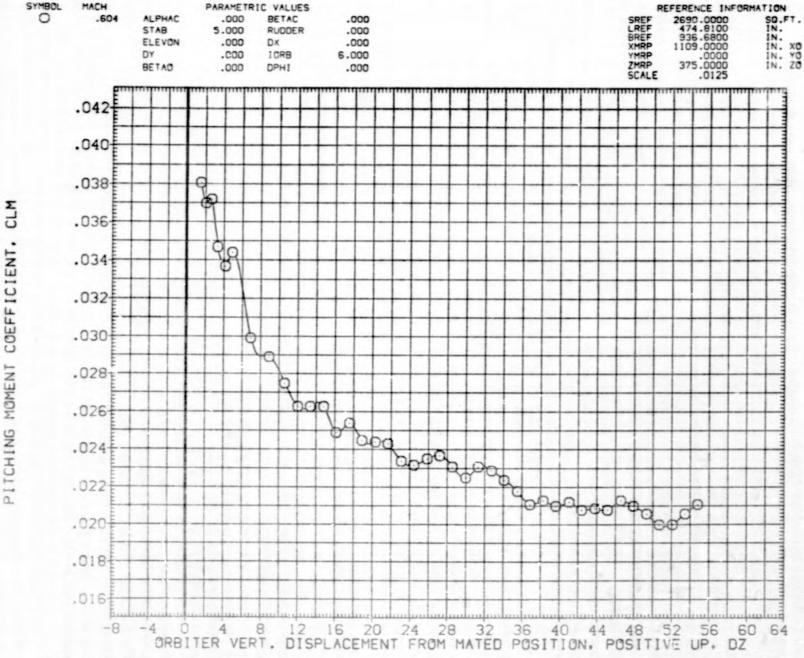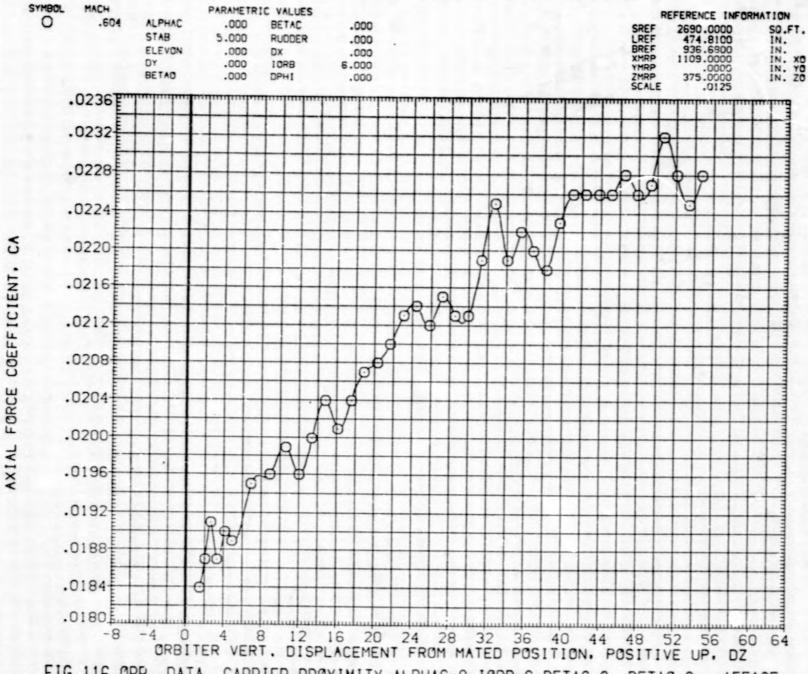
LTV44-559(CA26) 747/1 ATY 06 S! (ORBITER DATA) (AFE122)

FIG.113 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE122

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE122)

FIG.113 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE122

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LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE122)

FIG.113 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=6,BETAC=0, BETAO=0, AFE122
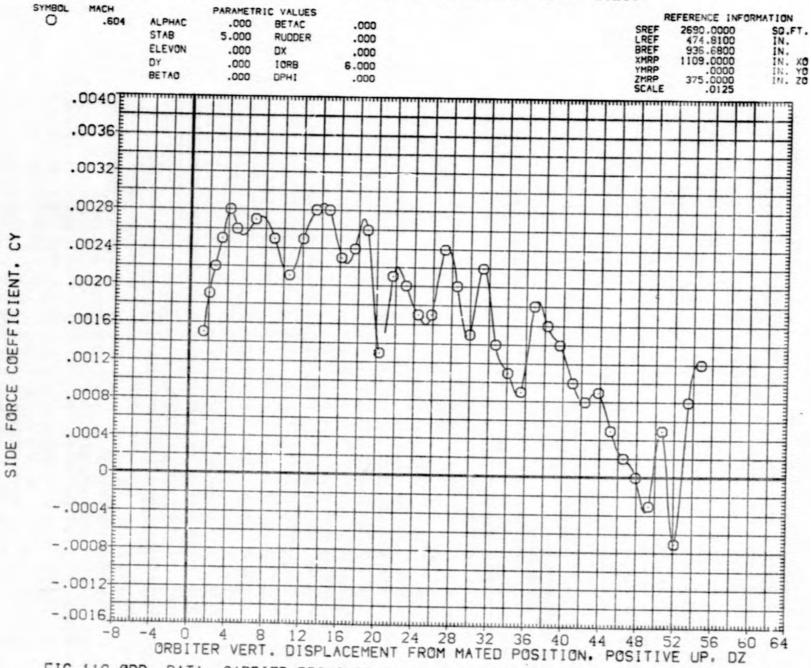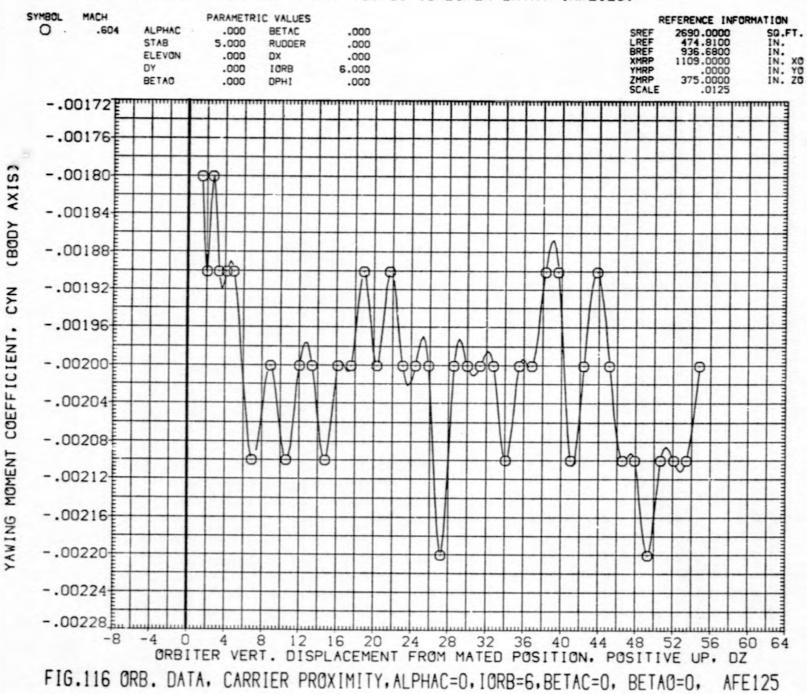
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE122)

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE123)

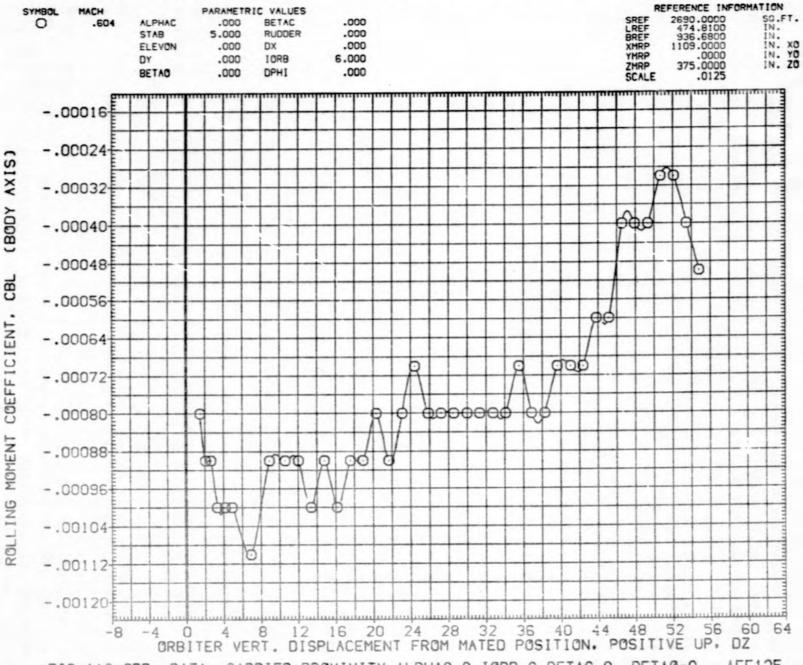| SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.603	ALPHAC	4.000	BETAC	.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	RUDDER	.000	LREF	474.8100	IN.
		ELEVON	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	8.000	XMRP	1109.0000	IN. XO
		BETAO	.000	DPHI	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

FIG.114 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE123

LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE123)

FIG.114 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE123

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LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE123)

FIG.114 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE123
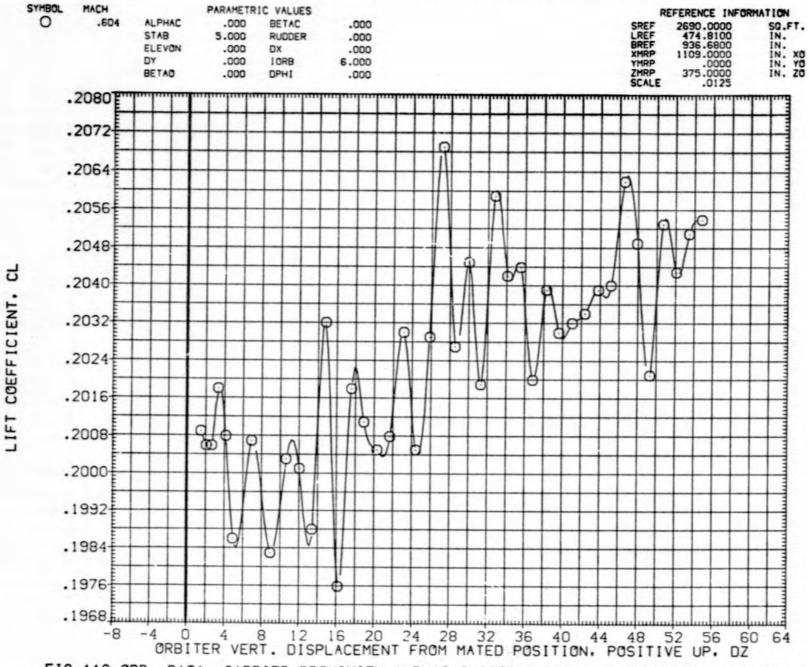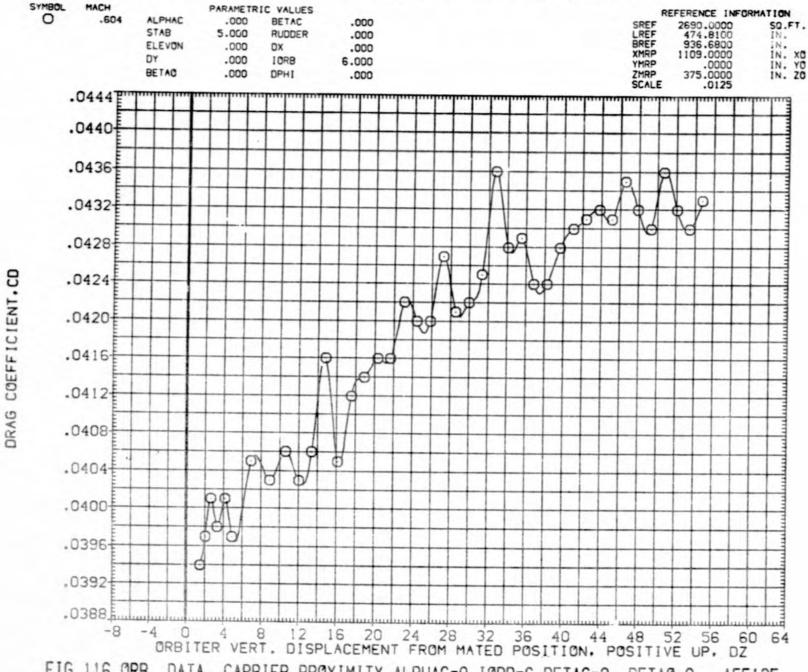
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE123)

FIG.114 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE123

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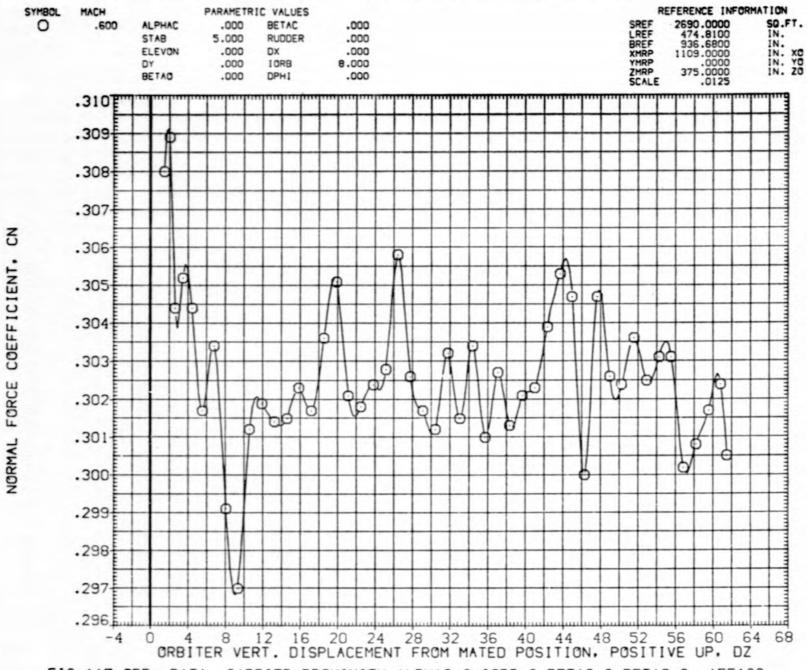FIG.114 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE123

FIG.114 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE123

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE123)

FIG.114 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE123
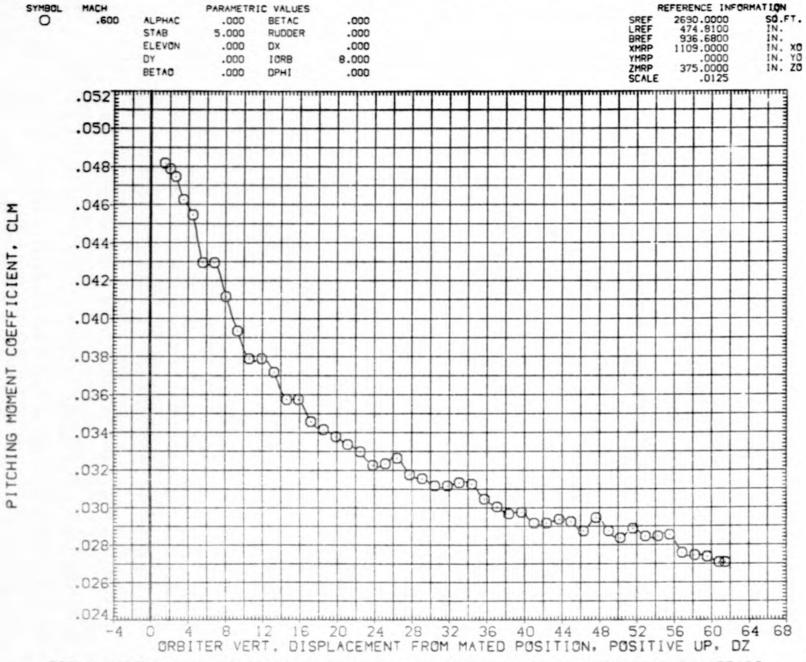
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE123)

FIG.114 ORB. DATA, CARRIER PROXIMITY,ALPHAC=4,IORB=8,BETAC=0, BETAO=0, AFE123

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE124)

FIG.115 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=4,BETAC=0, BETAO=0, AFE124
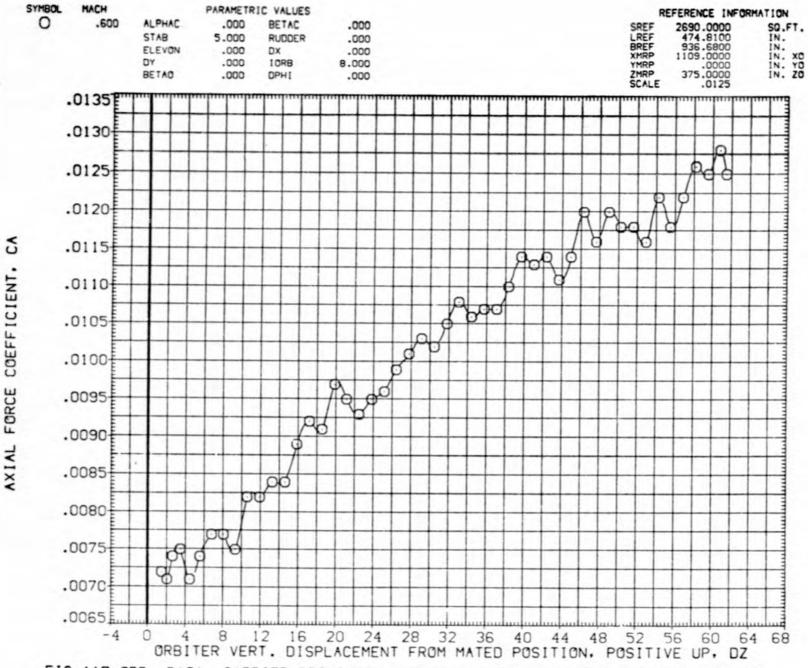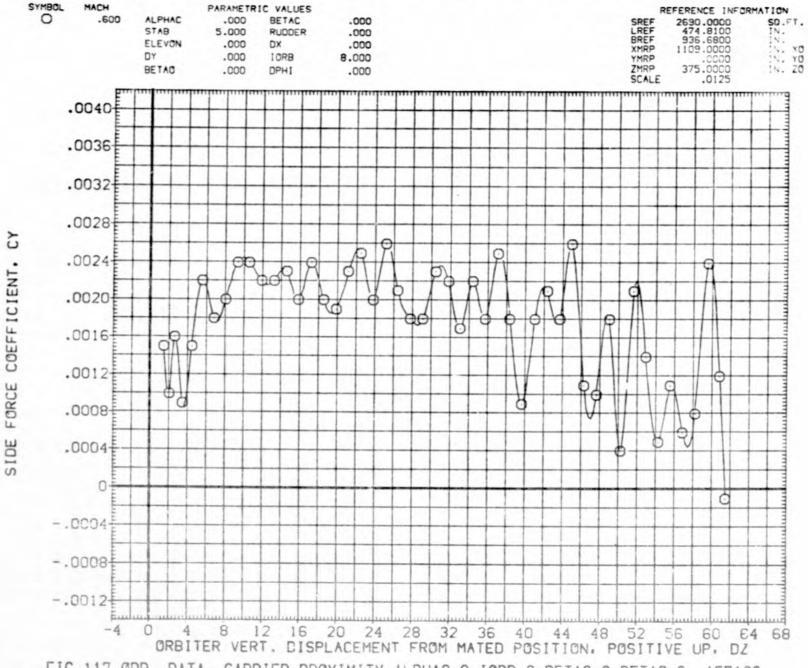
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE124)

FIG.115 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=4,BETAC=0, BETAO=0, AFE124

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LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE124)

FIG.115 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=4,BETAC=0, BETAO=0, AFE124

FIG.115 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=4,BETAC=0, BETAO=0, AFE124
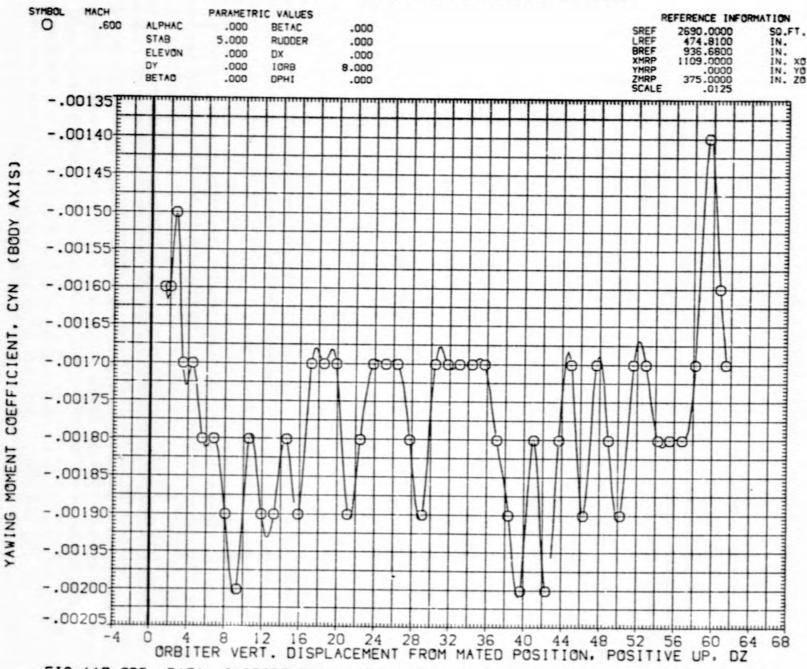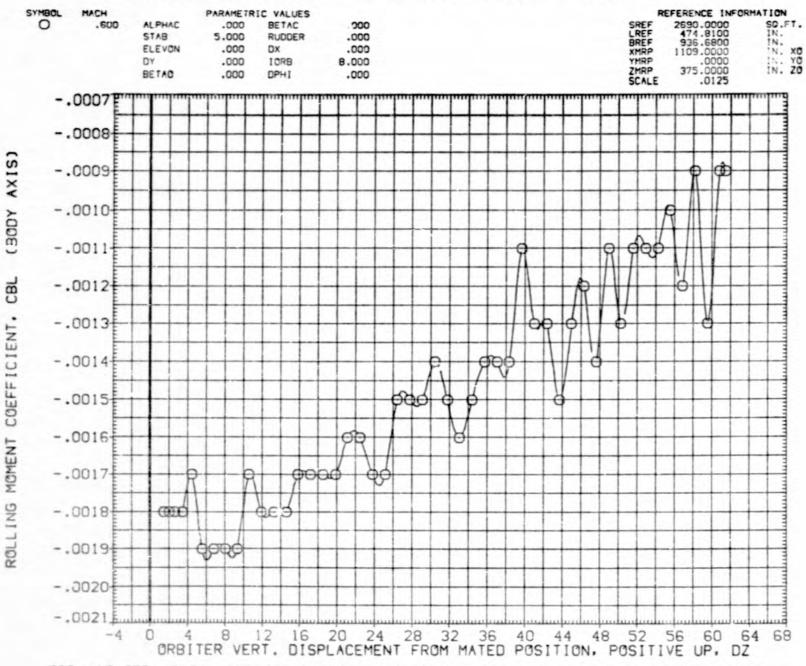
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE124)

SYMBOL   MACH   PARAMETRIC VALUES   REFERENCE INFORMATION
  O   .600   ALPHAC   .000   BETAC   .000   SREF   2690.0000   SQ.FT.
                   STAB   5.000   RUDDER   .000   LREF   474.8100   IN.
                   ELEVON   .000   DX   .000   BREF   936.6800   IN.
                   DY   .000   IORB   4.000   XMRP   1109.0000   IN. XO
                   BETAO   .000   DPHI   .000   YMRP   .0000   IN. YO
                                                                ZMRP   375.0000   IN. ZO
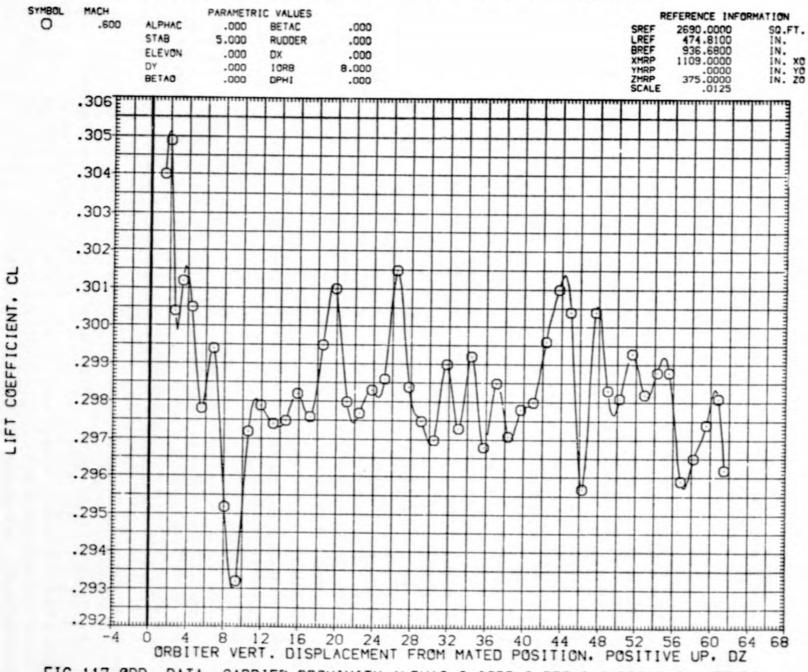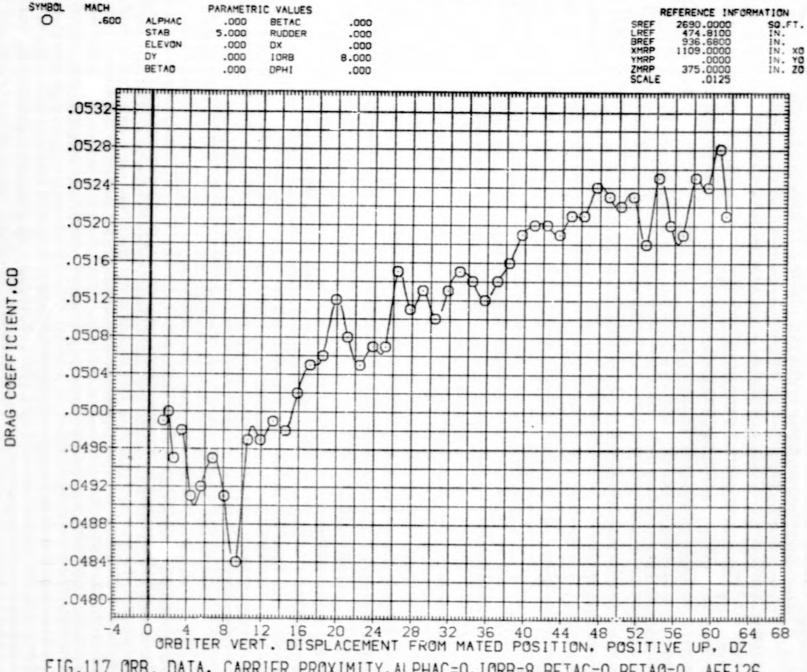   SCALE   .0125

FIG.115 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=4,BETAC=0, BETAO=0, AFE124

LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE124)

FIG.115 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=4,BETAC=0, BETAO=0, AFE124
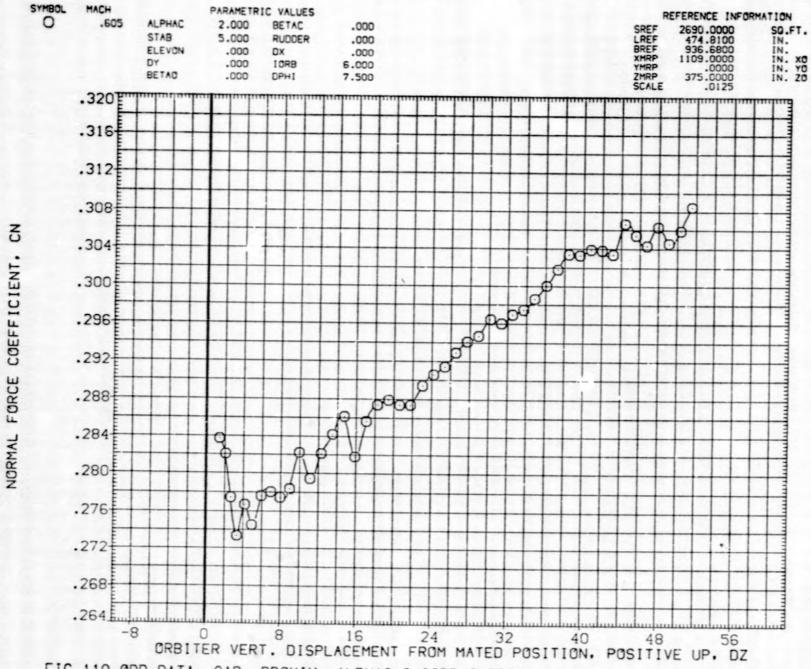
LTV44-559(CA26) 747/1 ATY O6 S1 (ORBITER DATA) (AFE124)

FIG.115 ORB. DATA, CARRIER PROXIMITY, ALPHAC=0, IORB=4, BETAC=0, BETAO=0, AFE124

FIG.115 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=4,BETAC=0, BETAO=0, AFE124
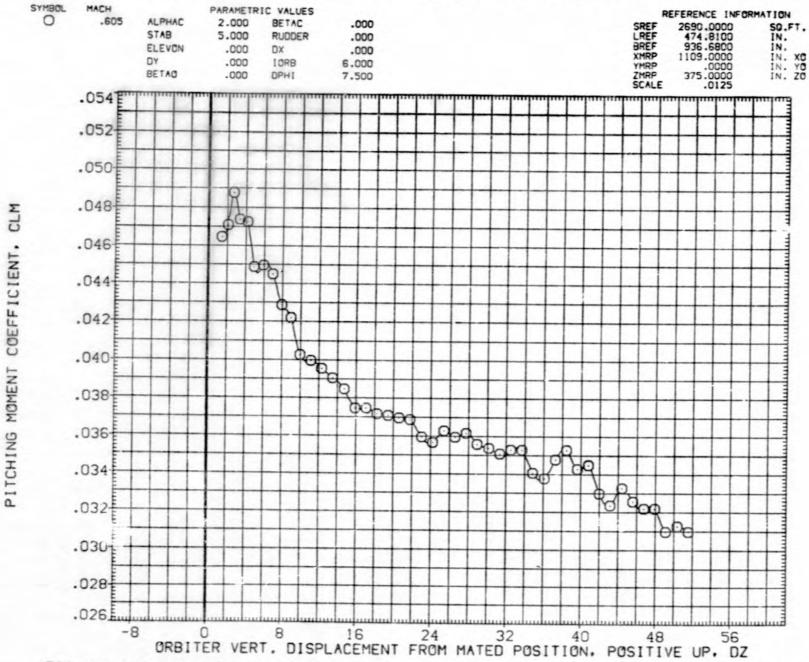
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE125)

FIG.116 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=6,BETAC=0, BETAO=0, AFE125

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE125)

FIG.116 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORE=6,BETAC=0, BETA0=0, AFE125

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE125)

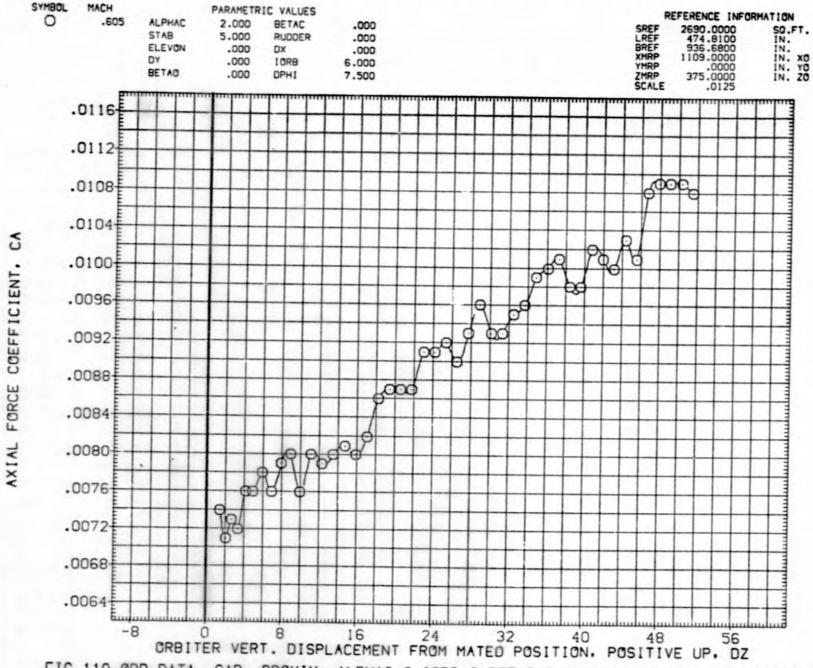FIG.116 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=6,BETAC=0, BETAO=0, AFE125

FIG.116 ORB. DATA, CARRIER PROXIMITY, ALPHAC=0, IORB=6, BETAC=0, BETAO=0, AFE125

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE125)

FIG.116 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=6,BETAC=0, BETAO=0, AFE125

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE125)

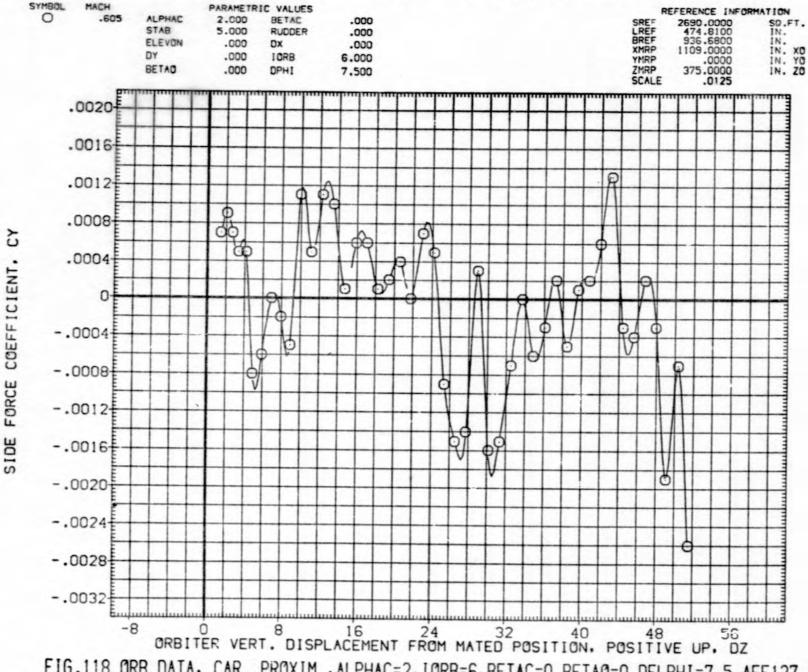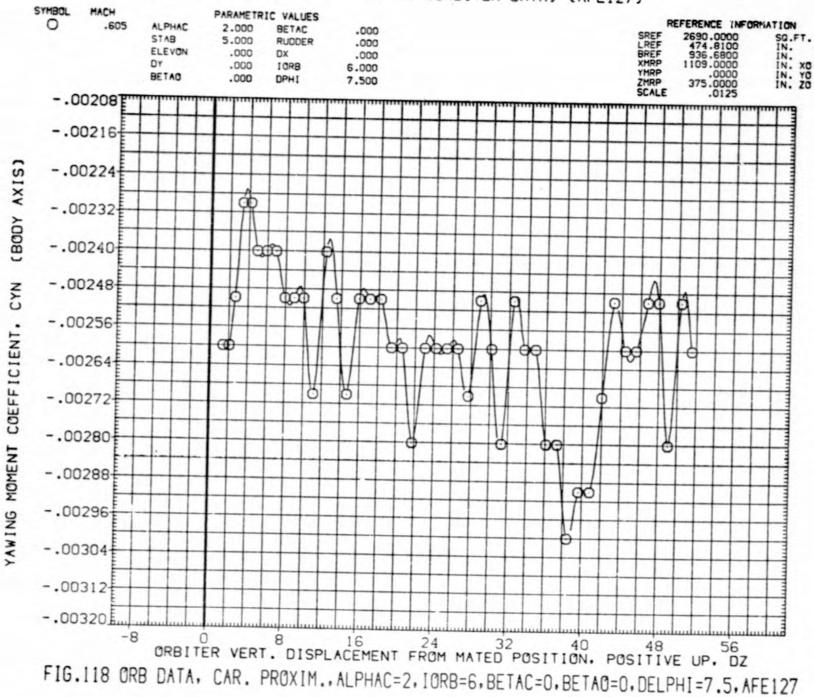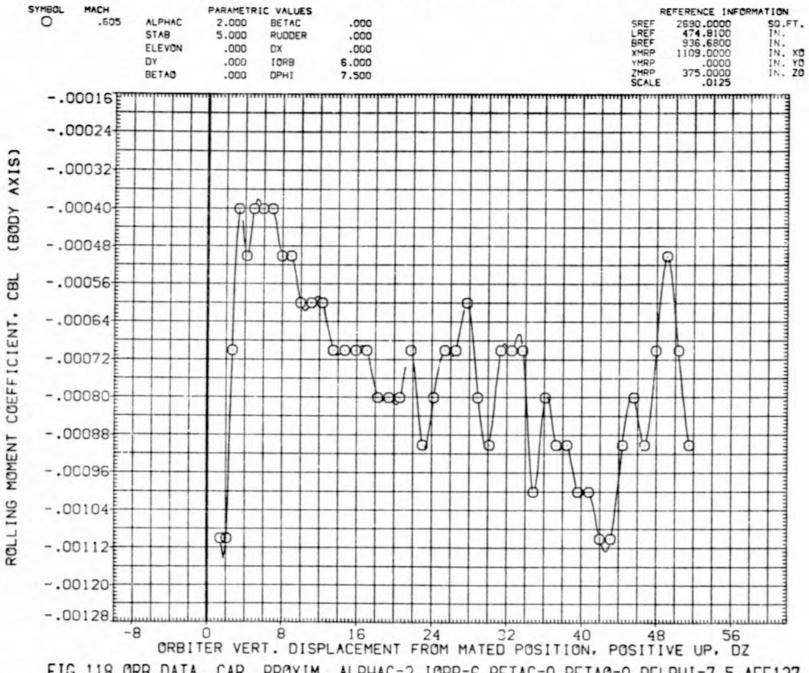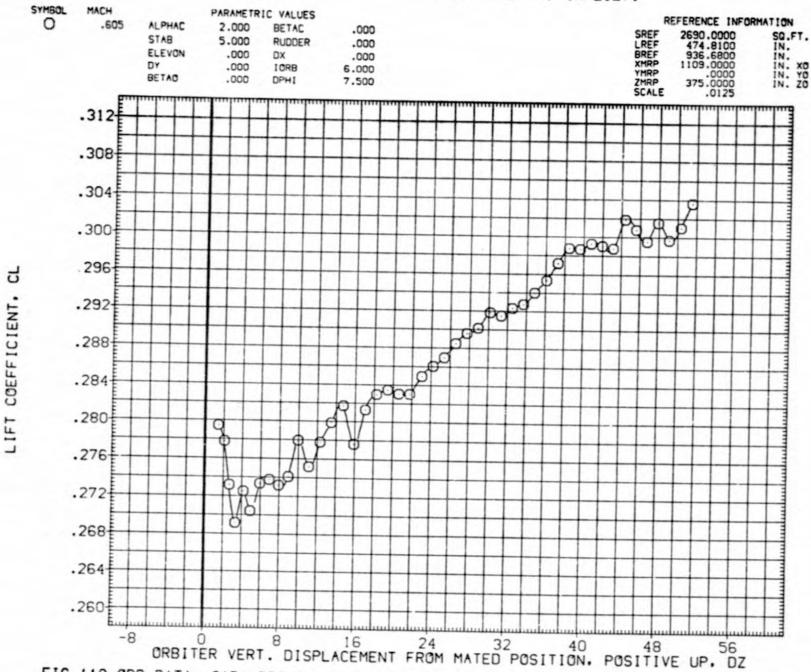| SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.604	ALPHAC	.000	BETAC	.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	RUDDER	.000	LREF	474.8100	IN.
		ELEVON	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	6.000	XMRP	1109.0000	IN. XO
		BETAO	.000	DPHI	.000	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

FIG.116 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=6,BETAC=0, BETAO=0, AFE125

LTV44-559(CA26) 747/1 ATY   06 S1 (ORBITER DATA) (AFE125)

FIG.116 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=6,BETAC=0, BETAO=0, AFE125
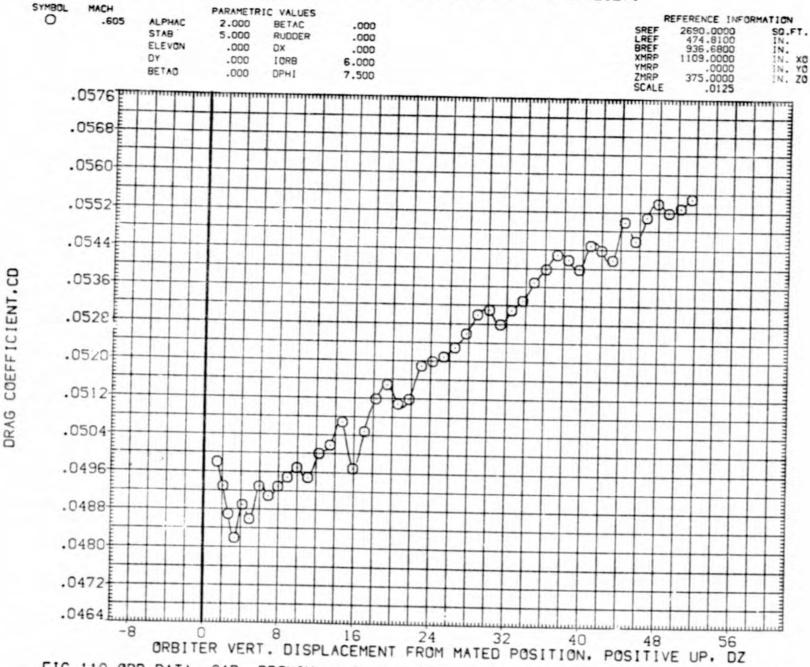
LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE125)

FIG.116 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=6,BETAC=0, BETAO=0, AFE125

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE126)

FIG.117 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=8,BETAC=0,BETAO=0, AFE126

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE126)

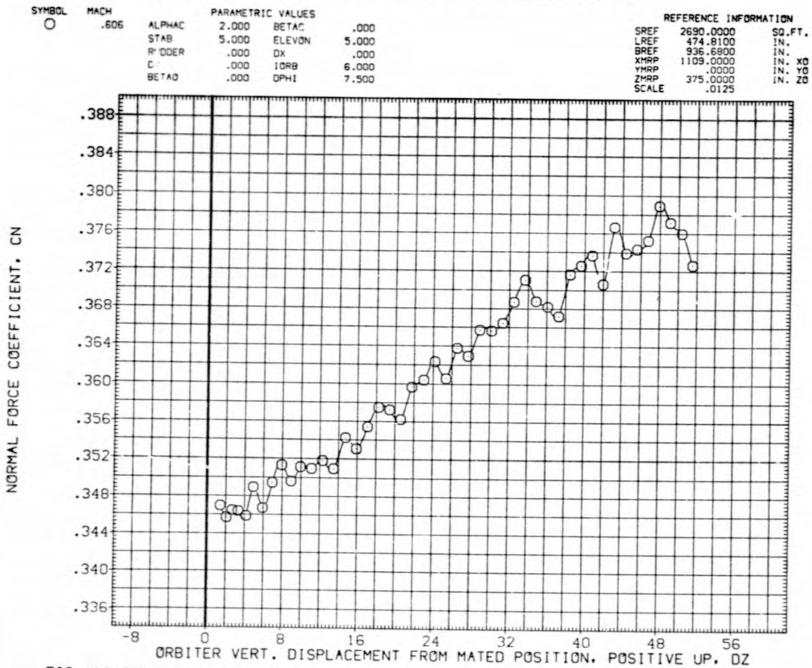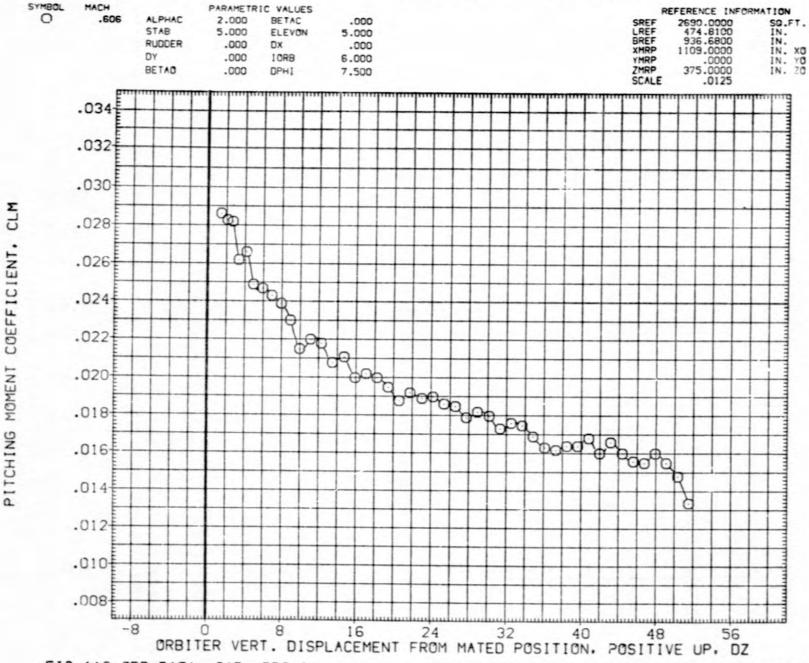FIG.117 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=8,BETAC=0,BETA0=0, AFE126

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE126)

SYMBOL	MACH	PARAMETRIC VALUES			
O	.600	ALPHAC	.000	BETAC	.000
		STAB	5.000	RUDDER	.000
		ELEVON	.000	DX	.000
		DY	.000	IORB	8.000
		BETAO	.000	DPHI	.000

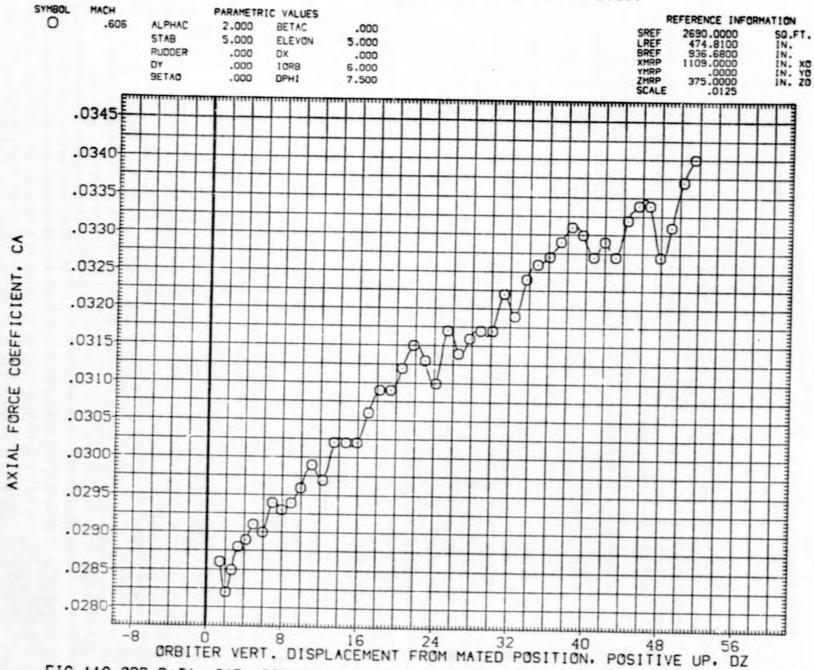| REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

FIG.117 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=8,BETAC=0,BETAO=0, AFE126

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE126)

FIG.117 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=8,BETAC=0,BETAO=0, AFE126

FIG.117 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=8,BETAC=0,BETAO=0, AFE126

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE126)

FIG.117 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=8,BETAC=0,BETAO=0, AFE126

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE126)

FIG.117 ORB. DATA, CARRIER PROXIMITY,ALPHAC=0,IORB=8,BETAC=0,BETAO=0, AFE126

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE126)

FIG.117 ORB. DATA, CARRIER PROXIMITY, ALPHAC=0, IORB=8, BETAC=0, BETAO=0, AFE126

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE127)

FIG.118 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=0,DELPHI=7.5,AFE127

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE127)

FIG.118 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=0,DELPHI=7.5,AFE127
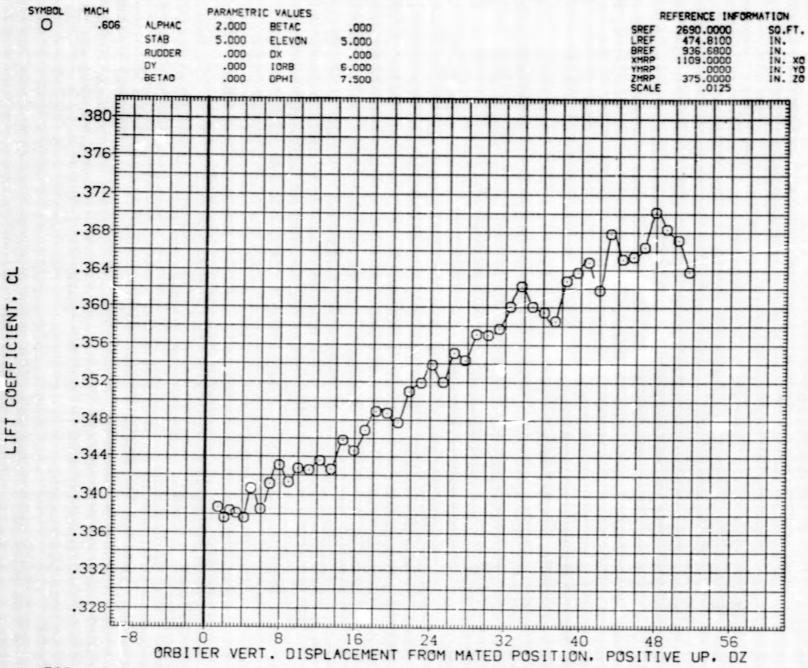
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LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE127)

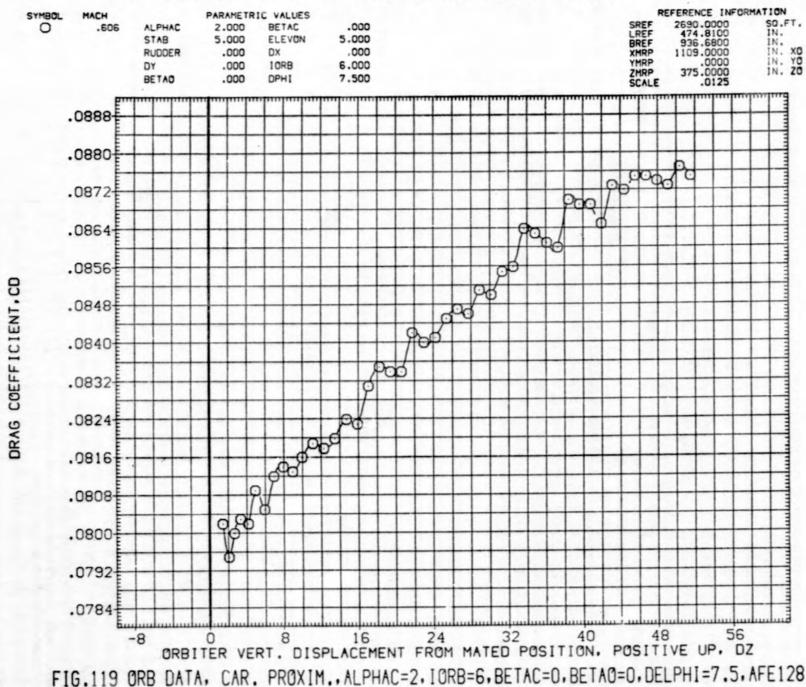FIG.118 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=0,DELPHI=7.5,AFE127

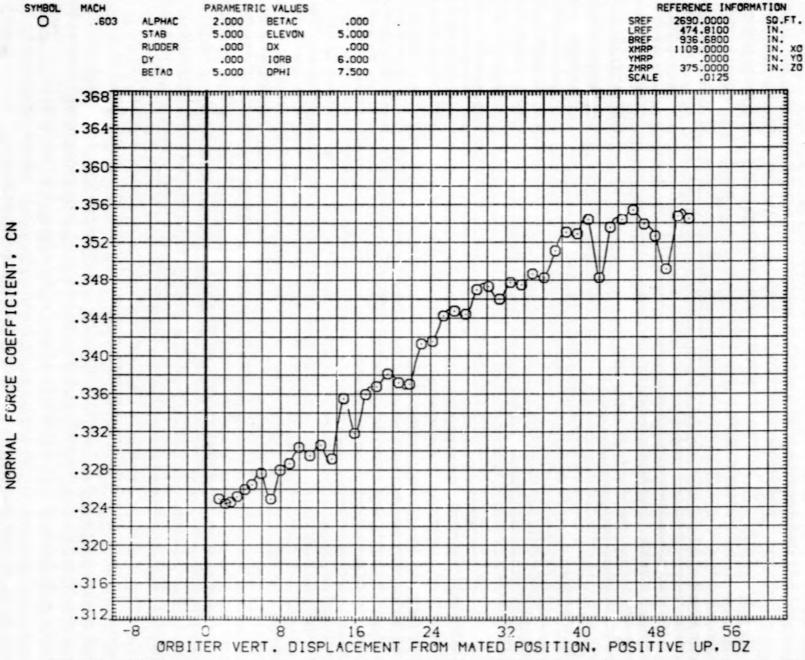FIG.118 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=0,DELPHI=7.5,AFE127

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE127)

FIG.118 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=0,DELPHI=7.5,AFE127

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE127)

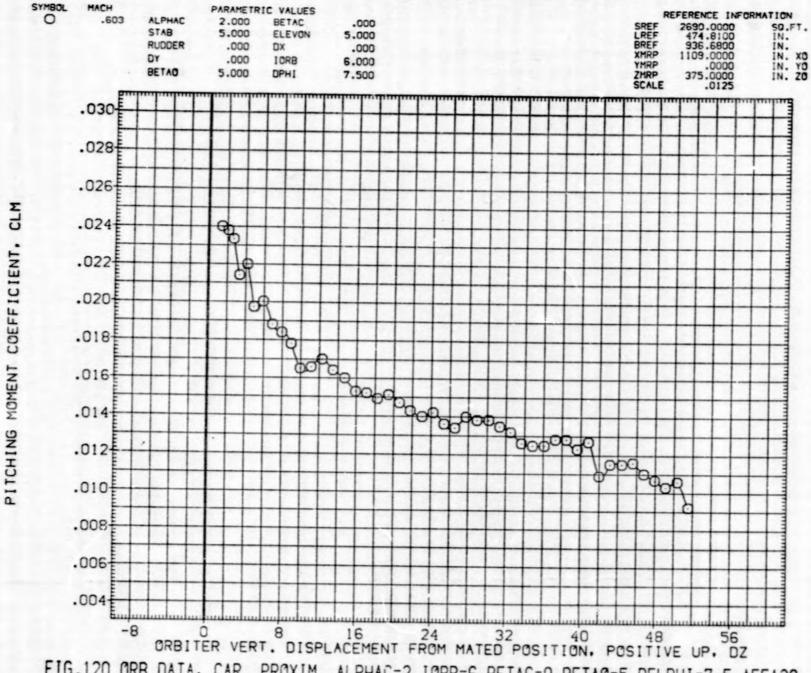FIG.118 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=0,DELPHI=7.5,AFE127

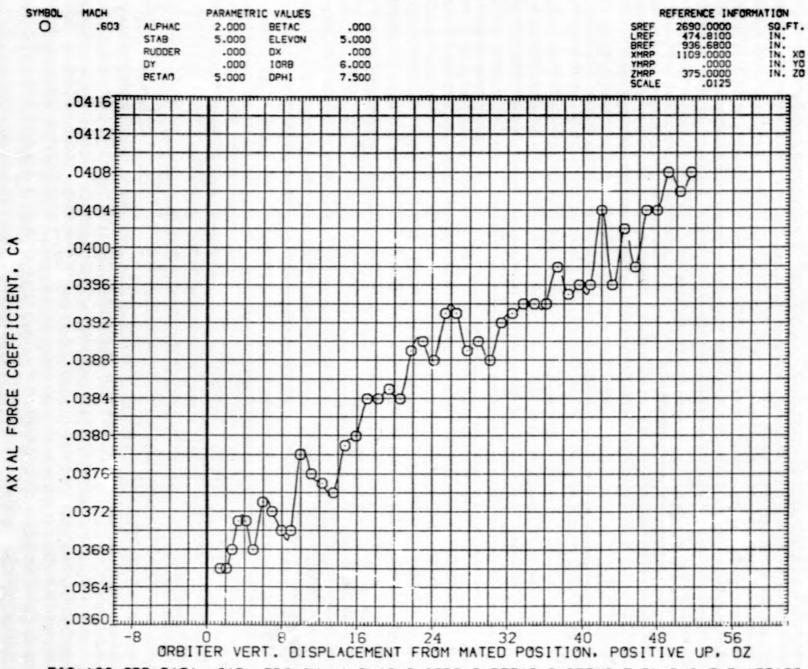LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE127)

FIG.118 ORB DATA, CAR. PROXIM., ALPHAC=2, IORB=6, BETAC=0, BETAO=0, DELPHI=7.5, AFE127

LTV44-559(CA26) 747/1 ATY 06 S1 (ORBITER DATA) (AFE127)

FIG.118 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=0,DELPHI=7.5,AFE127

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LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE128)

NORMAL FORCE COEFFICIENT, CN

ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG.119 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=0,DELPHI=7.5,AFE128
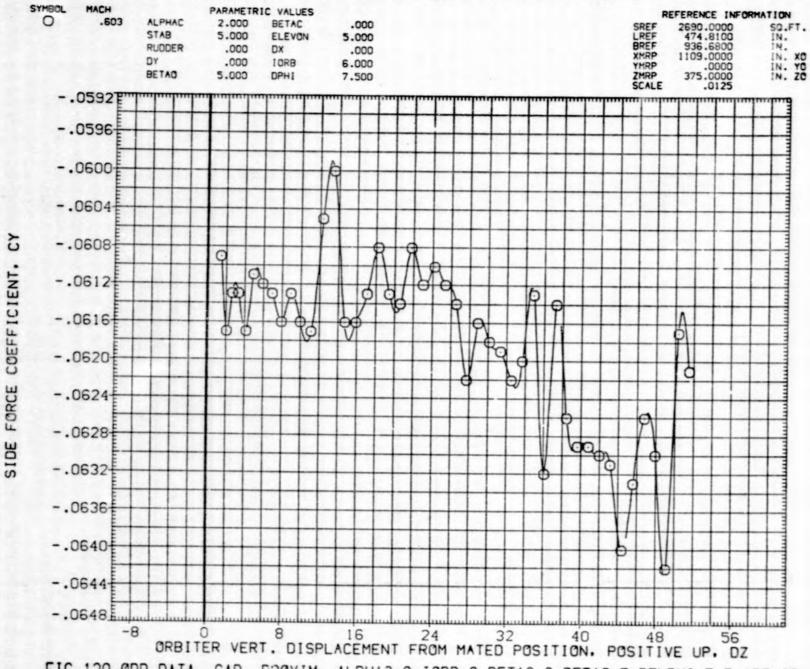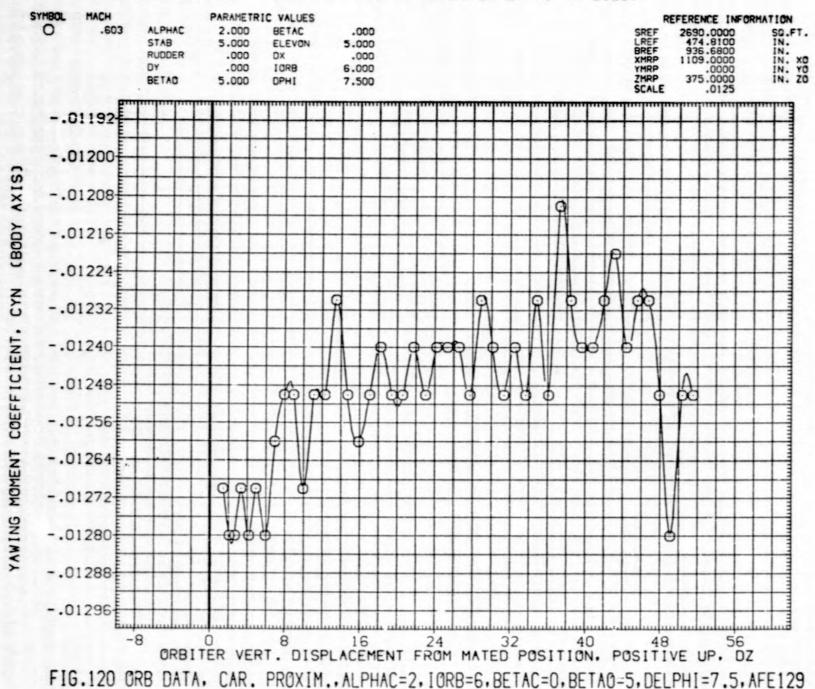
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE128)

FIG.119 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETA0=0,DELPHI=7.5,AFE128
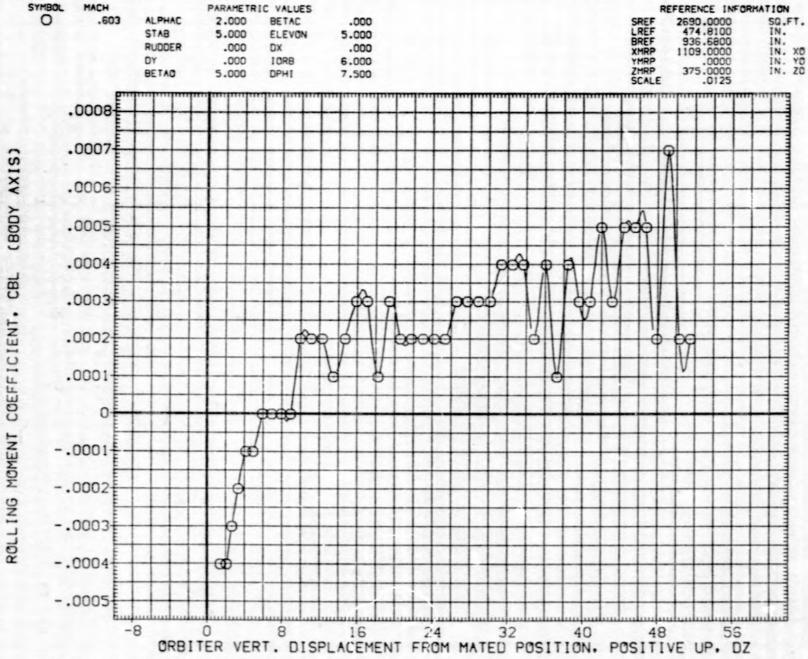
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE128)

FIG.119 ORB DATA, CAR. PROXIM., ALPHAC=2, IORB=6, BETAC=0, BETAO=0, DELPHI=7.5, AFE128

LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE128)

FIG.119 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=0,DELPHI=7.5,AFE128

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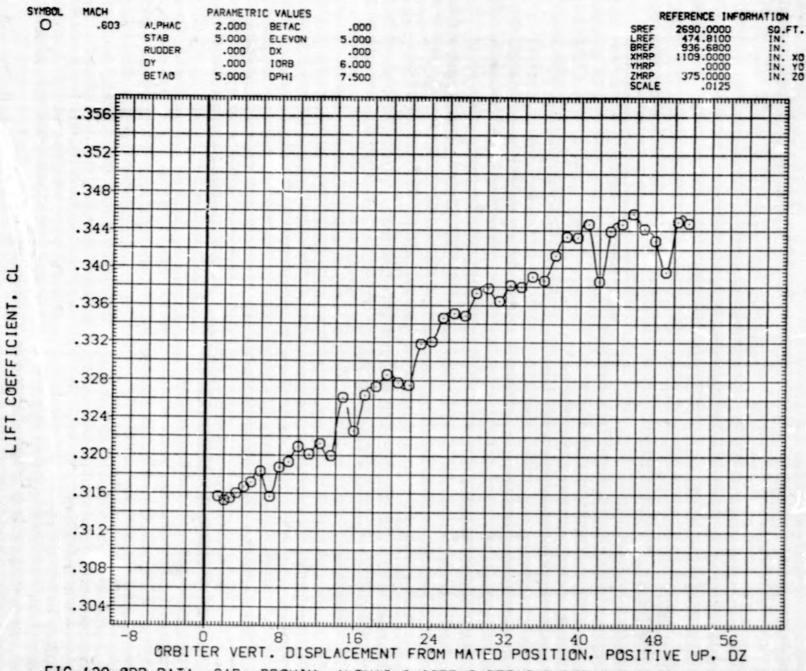
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE128)

FIG.119 ORB DATA, CAR. PROXIM., ALPHAC=2, IORB=6, BETAC=0, BETAO=0, DELPHI=7.5, AFE128
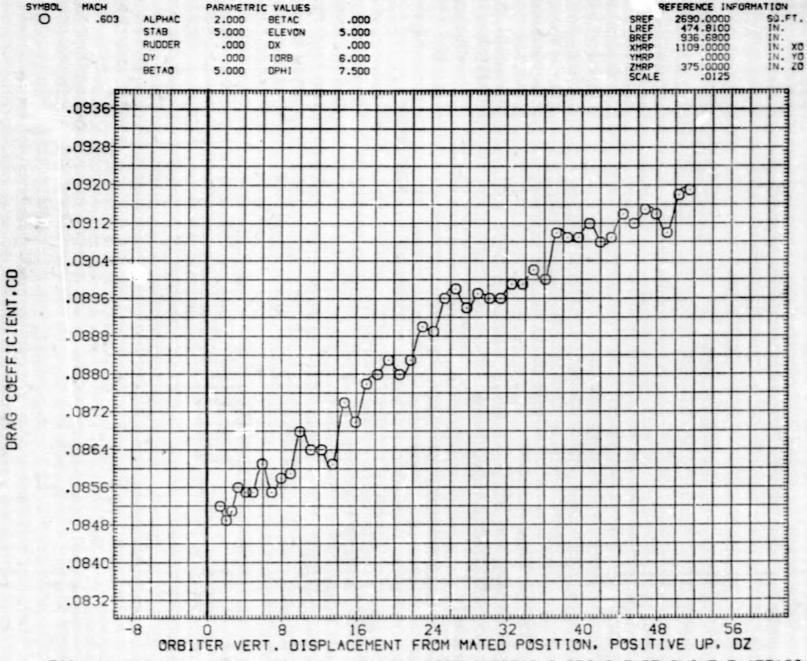
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE128)

FIG.119 ORB DATA, CAR. PROXIM., ALPHAC=2, IORB=6, BETAC=0, BETAO=0, DELPHI=7.5, AFE128

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FIG.119 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=0,DELPHI=7.5,AFE128

C.5

SYMBOL   MACH

O   .606

PARAMETRIC VALUES			
ALPHAC	2.000	BETAC	.000
STAB	5.000	ELEVON	5.000
RUDDER	.000	DX	.000
DY	.000	IORB	6.000
BETAO	.000	DPHI	7.500

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

DRAG COEFFICIENT, CD

ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG.119 ORB DATA, CAR. PROXIM., ALPHAC=2, IORB=6, BETAC=0, BETAO=0, DELPHI=7.5, AFE128

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE129)

FIG.120 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=5,DELPHI=7.5,AFE129
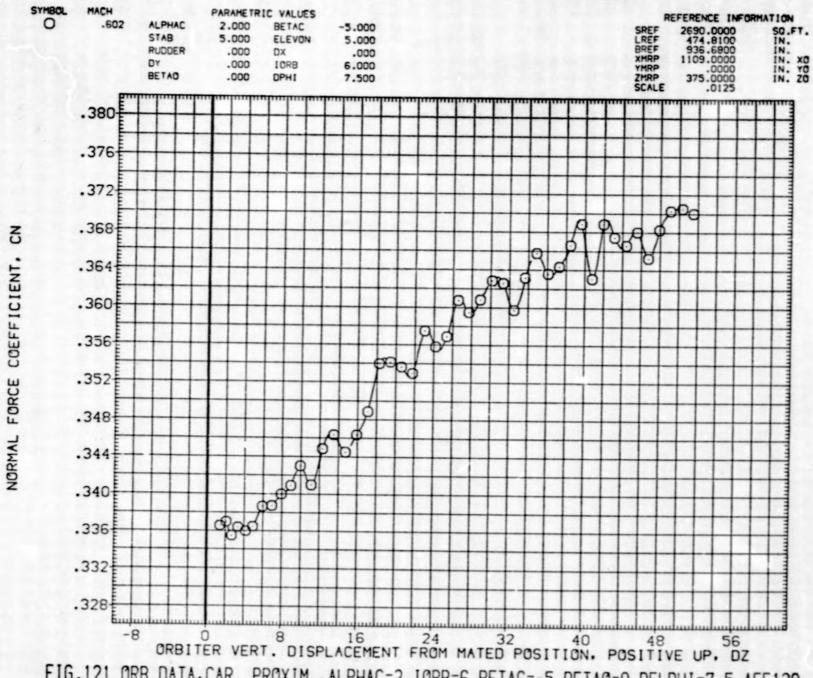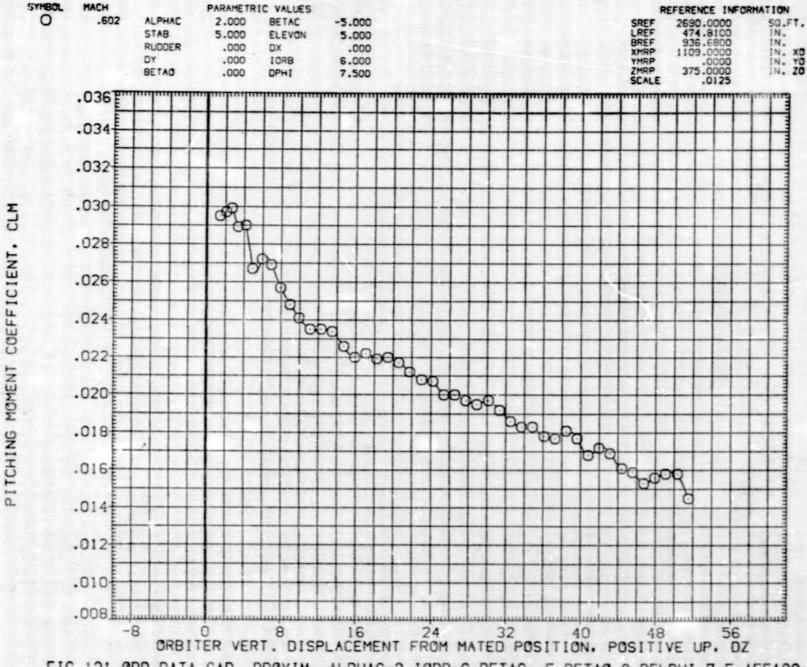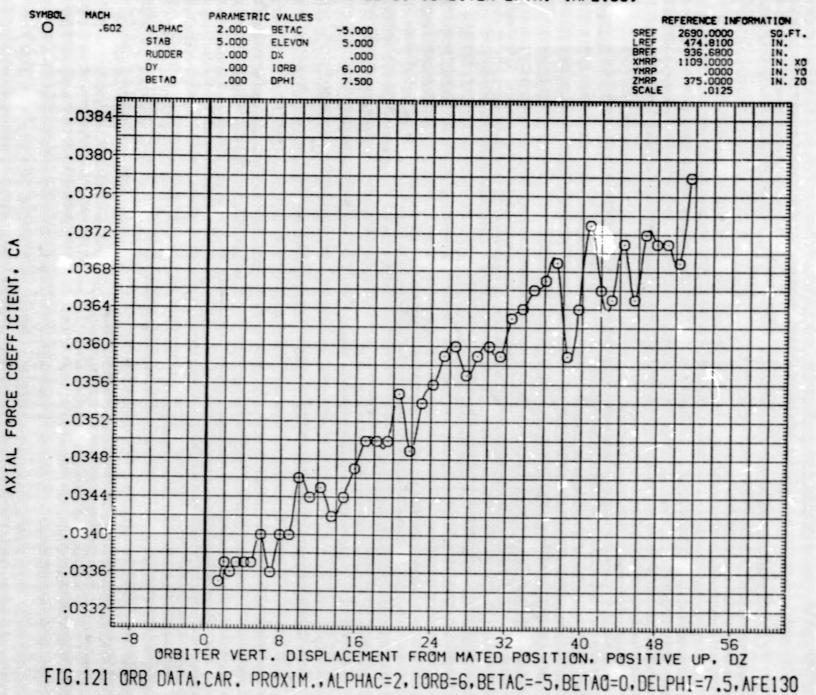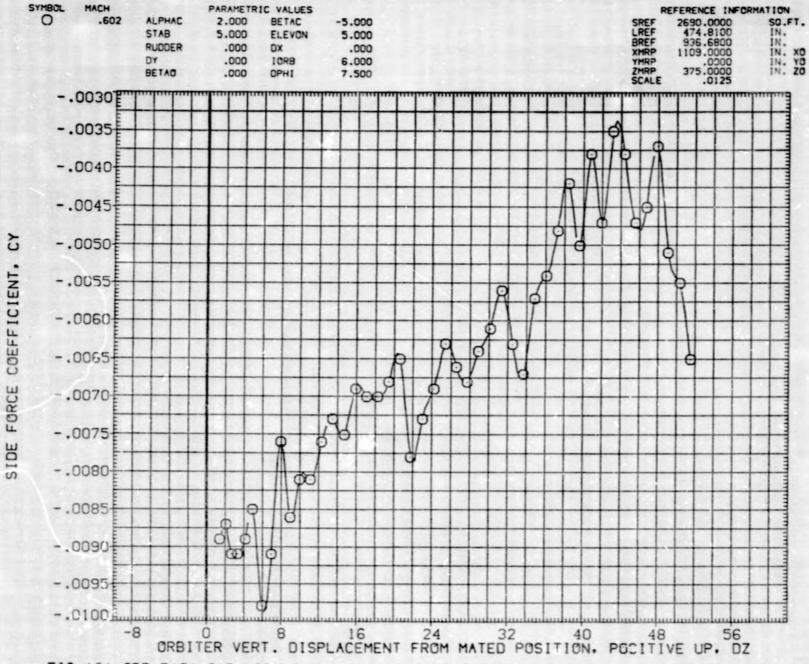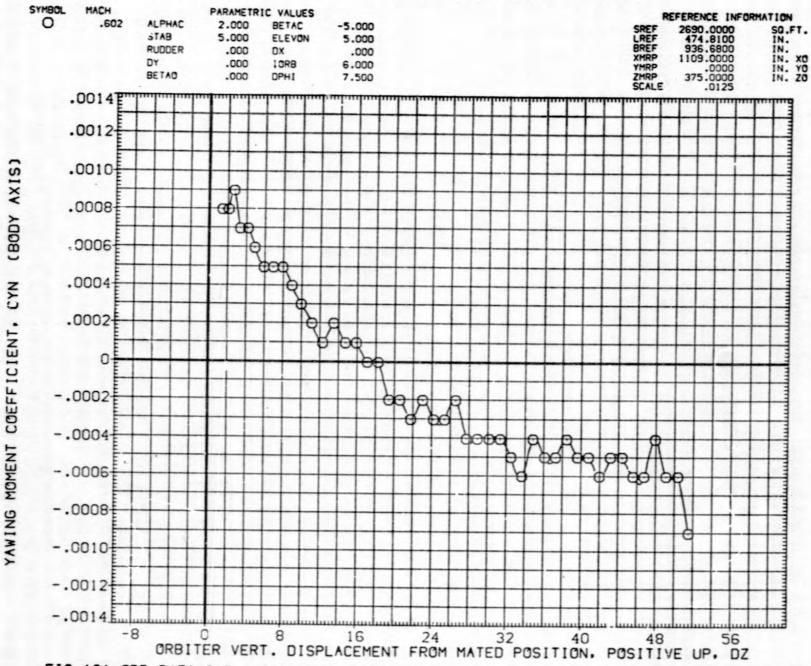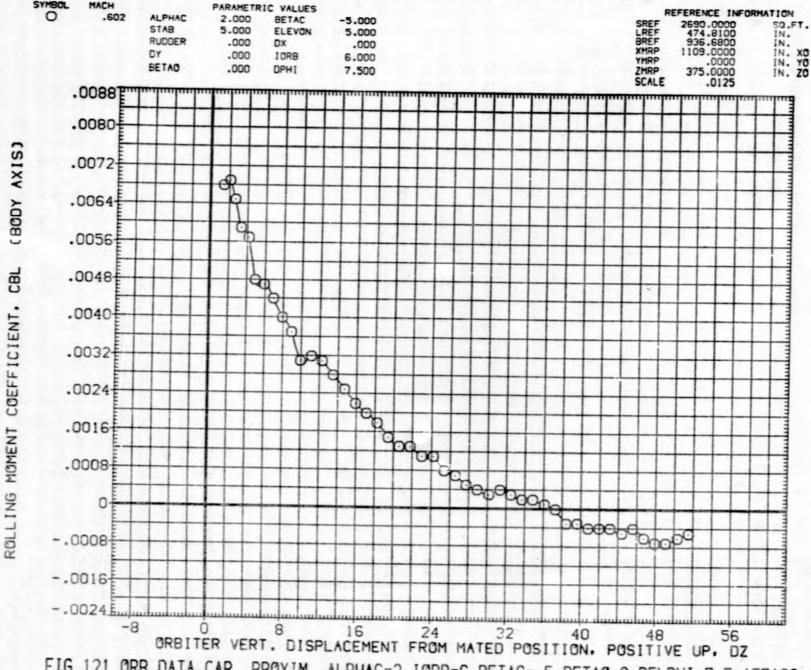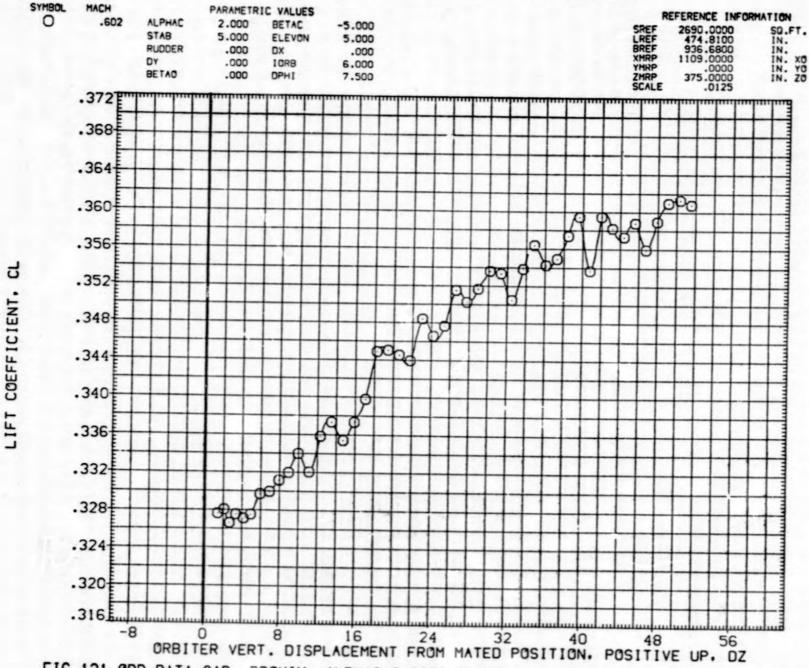
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE129)

FIG.120 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=5,DELPHI=7.5,AFE129

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LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE129)

SYMBOL	MACH	PARAMETRIC VALUES					REFERENCE INFORMATION		
O	.603	ALPHAC	2.000	BETAC	.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000	LREF	474.8100	IN.
		RUDDER	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	6.000	XMRP	1109.0000	IN. XO
		BETAO	5.000	DPHI	7.500	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

FIG.120 ORB DATA, CAR. PROXIM., ALPHAC=2, IORB=6, BETAC=0, BETAO=5, DELPHI=7.5, AFE129

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LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE129)

SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.603	ALPHAC	2.000	BETAC	.000	SREF	2690.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000	LREF	474.8100	IN.
		RUDDER	.000	DX	.000	BREF	936.6800	IN.
		DY	.000	IORB	6.000	XMRP	1109.0000	IN. XO
		BETAO	5.000	DPHI	7.500	YMRP	.0000	IN. YO
						ZMRP	375.0000	IN. ZO
						SCALE	.0125	

FIG.120 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=5,DELPHI=7.5,AFE129
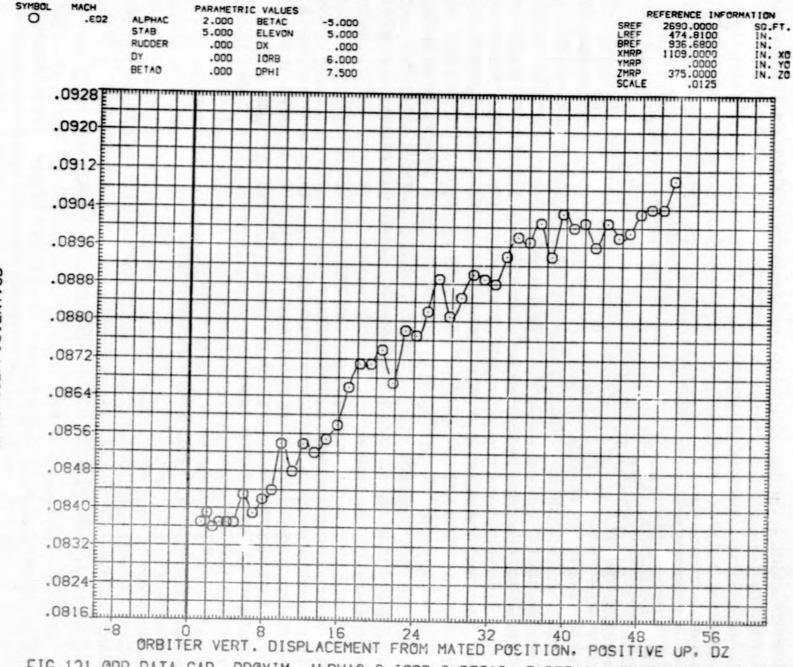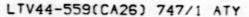
LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE129)

FIG.120 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=5,DELPHI=7.5,AFE129

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE129)

FIG.120 ORB DATA, CAR. PROXIM., ALPHAC=2, IORB=6, BETAC=0, BETAO=5, DELPHI=7.5, AFE129

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LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE129)

LIFT COEFFICIENT, CL

ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG.120 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=5,DELPHI=7.5,AFE129

ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG.120 ORB DATA, CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=0,BETAO=5,DELPHI=7.5,AFE129

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE130)

FIG.121 ORB DATA,CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=-5,BETAO=0,DELPHI=7.5,AFE130

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE130)

FIG.121 ORB DATA,CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=-5,BETA0=0,DELPHI=7.5,AFE130

LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE130)

SYMBOL MACH   PARAMETRIC VALUES   REFERENCE INFORMATION
  O   .602   ALPHAC   2.000   BETAC   -5.000   SREF   2690.0000   SQ.FT.
                  STAB   5.000   ELEVON   5.000   LREF   474.8100   IN.
                  RUDDER   .000   DX   .000   BREF   936.6800   IN.
                  DY   .000   IORB   6.000   XMRP   1109.0000   IN. XO
                  BETAO   .000   DPHI   7.500   YMRP   .0000   IN. YO
                                                       ZMRP   375.0000   IN. ZO
                                                       SCALE   .0125

FIG.121 ORB DATA,CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=-5,BETAO=0,DELPHI=7.5,AFE130

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LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE130)

SYMBOL	MACH
○	.602

PARAMETRIC VALUES

ALPHAC	2.000	BETAC	-5.000
STAB	5.000	ELEVON	5.000
RUDDER	.000	DX	.000
DY	.000	IORB	6.000
BETAO	.000	DPHI	7.500

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

FIG.121 ORB DATA,CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=-5,BETAO=0,DELPHI=7.5,AFE130

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LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE130)

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG.121 ORB DATA,CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=-5,BETAO=0,DELPHI=7.5,AFE130

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LTV44-559(CA26) 747/1 ATY 02 S1 (ORBITER DATA) (AFE130)

FIG.121 ORB DATA,CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=-5,BETA0=0,DELPHI=7.5,AFE130

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LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE130)

FIG.121 ORB DATA,CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=-5,BETAO=0,DELPHI=7.5,AFE130

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LTV44-559(CA26) 747/1 ATY O2 S1 (ORBITER DATA) (AFE130)

SYMBOL	MACH	PARAMETRIC VALUES			
O	.E02	ALPHAC	2.000	BETAC	-5.000
		STAB	5.000	ELEVON	5.000
		RUDDER	.000	DX	.000
		DY	.000	IORB	6.000
		BETAO	.000	DPHI	7.500

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1109.0000	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0125	

FIG.121 ORB DATA,CAR. PROXIM.,ALPHAC=2,IORB=6,BETAC=-5,BETAO=0,DELPHI=7.5,AFE130

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FIG.122 CARRIER ISOLATED, RFE016

FIG.122 CARRIER ISOLATED, RFE016

LTV44-559(CA26) 747/1 ATY   (RFE016)

FIG.122 CARRIER ISOLATED, RFE016

LTV44-559(CA26) 747/1 ATY   (RFE016)

FIG.122 CARRIER ISOLATED, RFE016

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LTV44-559(CA26) 747/1 ATY   (RFE016)

FIG.122 CARRIER ISOLATED. RFE016

FIG.122 CARRIER ISOLATED, RFE016

(RFEO16)

FIG.122 CARRIER ISOLATED, RFEO16

SYMBOL   MACH   PARAMETRIC VALUES

O   .599   BETAC   .000   STAB   5.000

               RUDDER   .000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

FIG.122 CARRIER ISOLATED, RFE016

LTV44-559(CA26) 747/1 ATY   (RFE017)

FIG.123 CARRIER ISOLATED, RFE017

FIG.123 CARRIER ISOLATED, RFE017

LTV44-559(CA26) 747/1 ATY   (RFE017)

FIG.123 CARRIER ISOLATED, RFE017

SYMBOL   MACH   PARAMETRIC VALUES
  O   .597   BETAC   .000   STAB   5.000
                  RUDDER   .000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.123 CARRIER ISOLATED, RFE017

LTV44-559(CA26) 747/1 ATY   (RFE017)

FIG.123 CARRIER ISOLATED, RFE017

FIG.123 CARRIER ISOLATED, RFE017

LTV44-559(CA26) 747/1 ATY   (RFE017)

SYMBOL   MACH   PARAMETRIC VALUES
  O   .597   BETAC   .000   STAB   5.000
                 RUDDER   .000

FIG. 123 CARRIER ISOLATED, RFE017

FIG.123 CARRIER ISOLATED, RFE017

(RFE018)

NORMAL FORCE COEFFICIENT, CN

747 ANGLE OF ATTACK, ALPHAC

FIG.124 CARRIER ISOLATED, RFE018

SYMBOL   MACH   PARAMETRIC VALUES
  O   .599   BETAC   .000   STAB   5.000
                   RUDDER   .000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.124 CARRIER ISOLATED, RFE018

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SYMBOL   MACH   PARAMETRIC VALUES

○   .599   BETAC   .000   STAB   5.000

                 RUDDER   .000

REFERENCE INFORMATION

SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	
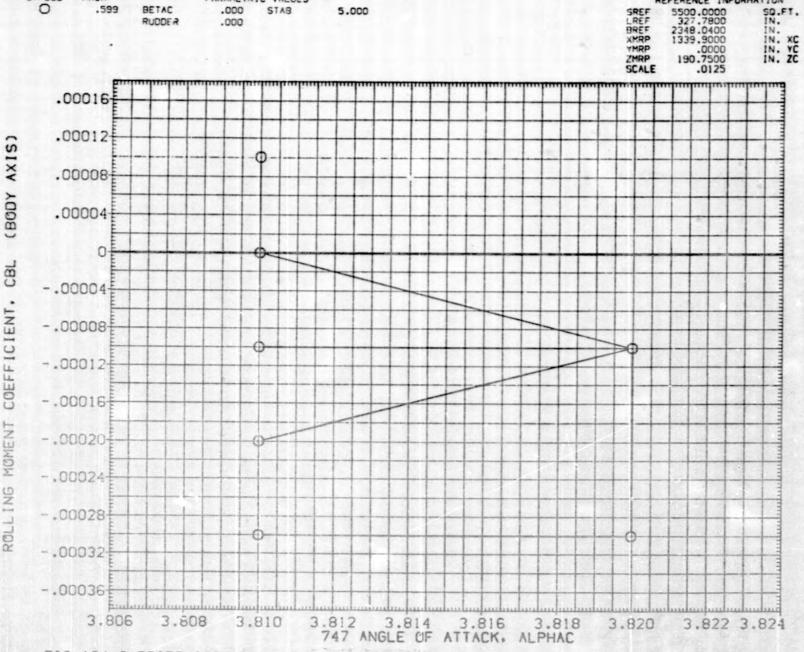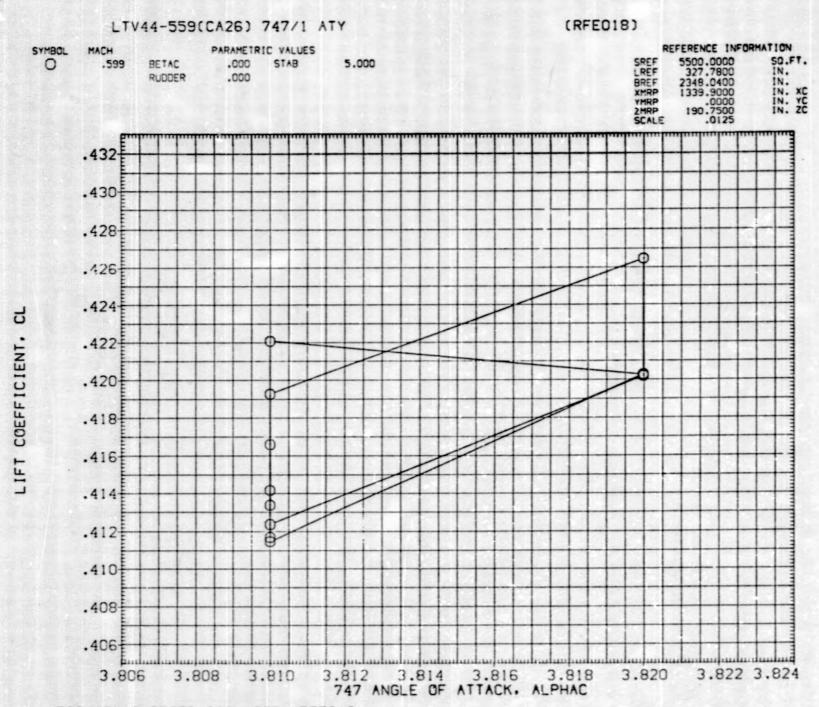
FIG.124 CARRIER ISOLATED, RFE018

FIG.124 CARRIER ISOLATED, RFE018

SYMBOL   MACH   PARAMETRIC VALUES

O   .599   BETAC   .000   STAB   5.000

            RUDDER   .000

REFERENCE INFORMATION

SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

FIG.124 CARRIER ISOLATED, RFE018

SYMBOL   MACH   PARAMETRIC VALUES
  O   .599   BETAC   .000   STAB   5.000
                  RUDDER   .000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.124 CARRIER ISOLATED, RFE018

LTV44-559(CA26) 747/1 ATY   (RFE018)

SYMBOL   MACH   PARAMETRIC VALUES
  O   .599   BETAC   .000   STAB   5.000
                    RUDDER   .000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.124 CARRIER ISOLATED, RFE018

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FIG.124 CARRIER ISOLATED, RFE018

FIG.125 CARRIER ISOLATED, RFE019

FIG.125 CARRIER ISOLATED, RFE019

LTV44-559(CA26) 747/1 ATY   (RFE019)

FIG.125 CARRIER ISOLATED, RFE019

SYMBOL   MACH   PARAMETRIC VALUES
  O   .600   BETAC   .000   STAB   5.000
                   RUDDER   .000

FIG.125 CARRIER ISOLATED, RFE019

FIG.125 CARRIER ISOLATED, RFE019

SYMBOL   MACH   PARAMETRIC VALUES
O   .600   BETAC   .000   STAB   5.000
                   RUDDER   .000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.125 CARRIER ISOLATED, RFE019

LTV44-559(CA26) 747/1 ATY   (RFE019)

FIG.125 CARRIER ISOLATED, RFE019

LTV44-559(CA26) 747/1 ATY   (RFE019)

FIG.125 CARRIER ISOLATED, RFE019

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FIG.126 CARRIER ISOLATED, RFE020

FIG.126 CARRIER ISOLATED, RFE020

LTV44-559(CA26) 747/1 ATY   (RFE020)

FIG.126 CARRIER ISOLATED, RFE020

SYMBOL　MACH　　　　　PARAMETRIC VALUES
O　　　.605　　BETAC　　　.000　　STAB　　-1.000
　　　　　　　RUDDER　　　.000

REFERENCE INFORMATION
SREF　5500.0000　SQ.FT.
LREF　327.7800　IN.
BREF　2348.0400　IN.
XMRP　1339.9000　IN. XC
YMRP　　　.0000　IN. YC
ZMRP　190.7500　IN. ZC
SCALE　　.0125

SIDE FORCE COEFFICIENT, CY

747 ANGLE OF ATTACK, ALPHAC

FIG.126 CARRIER ISOLATED, RFE020

LTV44-559(CA26) 747/1 ATY   (RFE020)

FIG.126 CARRIER ISOLATED, RFE020

FIG.126 CARRIER ISOLATED, RFE020

LTV44-559(CA26) 747/1 ATY   (RFE020)

SYMBOL   MACH   PARAMETRIC VALUES
  O   .605   BETAC   .000   STAB   -1.000
                  RUDDER   .000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.126 CARRIER ISOLATED, RFE020

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FIG.126 CARRIER ISOLATED, RFE020

FIG.127 CARRIER ISOLATED, RFE021

FIG.127 CARRIER ISOLATED, RFEO21

LTV44-559(CA26) 747/1 ATY   (RFE021)

FIG.127 CARRIER ISOLATED, RFE021

FIG.127 CARRIER ISOLATED, RFE021

LTV44-559(CA26) 747/1 ATY   (RFE021)

FIG.127 CARRIER ISOLATED, RFE021

FIG.127 CARRIER ISOLATED, RFE021

LTV44-559(CA26) 747/1 ATY (RFE021)

FIG.127 CARRIER ISOLATED, RFE021

FIG.127 CARRIER ISOLATED, RFE021

SYMBOL   MACH   PARAMETRIC VALUES
O   .602   BETAC   .000   STAB   -1.000
                 RUDDER   .000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.128 CARRIER ISOLATED, RFE022

SYMBOL   MACH   PARAMETRIC VALUES
  O   .602   BETAC   .000   STAB   -1.000
                     RUDDER   .000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.128 CARRIER ISOLATED, RFE022

FIG.128 CARRIER ISOLATED, RFE022

FIG.128 CARRIER ISOLATED, RFE022

LTV44-559(CA26) 747/1 ATY   (RFE022)

FIG.128 CARRIER ISOLATED, RFE022

FIG.128 CARRIER ISOLATED, RFE022

LTV44-559(CA26) 747/1 ATY   (RFE022)

FIG.128 CARRIER ISOLATED, RFE022

SYMBOL   MACH   PARAMETRIC VALUES
O   .602   BETAC   .000   STAB   -1.000
                 RUDDER   .000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.128 CARRIER ISOLATED, RFE022

SYMBOL　　MACH　　　　　　　PARAMETRIC VALUES
O　　　　.599　　BETAC　　-5.000　STAB　　5.000
　　　　　　　　　RUDDER　　.000

REFERENCE INFORMATION
SREF　　5500.0000　SQ.FT.
LREF　　327.7800　IN.
BREF　　2348.0400　IN.
XMRP　　1339.9000　IN. XC
YMRP　　　　.0000　IN. YC
ZMRP　　190.7500　IN. ZC
SCALE　　　.0125

NORMAL FORCE COEFFICIENT, CN

.3424
.3420
.3416
.3412
.3408
.3404
.3400
.3396
.3392
.3388
.3384
.3380
.3376
.3372

2.676　2.678　2.680　2.682　2.684　2.686　2.688　2.690　2.692 2.694
747 ANGLE OF ATTACK, ALPHAC

FIG.129 CARRIER ISOLATED, RFE023

SYMBOL   MACH   PARAMETRIC VALUES
O   .599   BETAC   -5.000   STAB   5.000
                    RUDDER   .000

REFERENCE INFORMATION

SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

PITCHING MOMENT COEFFICIENT. CLM

747 ANGLE OF ATTACK, ALPHAC

FIG.129 CARRIER ISOLATED, RFE023

LTV44-559(CA26) 747/1 ATY   (RFE023)

FIG.129 CARRIER ISOLATED, RFE023

LTV44-559(CA26) 747/1 ATY   (RFE023)

FIG.129 CARRIER ISOLATED, RFE023

LTV44-559(CA26) 747/1 ATY   (RFE023)

FIG.129 CARRIER ISOLATED, RFE023

LTV44-559(CA26) 747/1 ATY   (RFE023)

FIG.129 CARRIER ISOLATED, RFE023

LTV44-559(CA26) 747/1 ATY   (RFE023)

FIG.129 CARRIER ISOLATED, RFE023

FIG.129 CARRIER ISOLATED, RFE023

LTV44-559(CA26) 747/1 ATY   (RFE024)

FIG.130 CARRIER ISOLATED, DELZ SWEEP, RFE024

LTV44-559(CA26) 747/1 ATY   (RFE024)

FIG.130 CARRIER ISOLATED, DELZ SWEEP, RFE024

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LTV44-559(CA26) 747/1 ATY   (RFE024)

FIG.130 CARRIER ISOLATED, DELZ SWEEP, RFE024

FIG.130 CARRIER ISOLATED, DELZ SWEEP, RFE024

LTV44-559(CA26) 747/1 ATY   (RFE024)

FIG.130 CARRIER ISOLATED, DELZ SWEEP, RFE024

FIG.130 CARRIER ISOLATED, DELZ SWEEP, RFE024

LTV44-559(CA26) 747/1 ATY   (RFE024)

FIG.130 CARRIER ISOLATED, DELZ SWEEP, RFE024

FIG.130 CARRIER ISOLATED, DELZ SWEEP, RFE024

LTV44-559(CA26) 747/1 ATY   (RFE025)

FIG.131 CARRIER ISOLATED, DELX SWEEP, RFE025

FIG.131 CARRIER ISOLATED, DELX SWEEP, RFE025

LTV44-559(CA26) 747/1 ATY   (RFE025)

FIG.131 CARRIER ISOLATED, DELX SWEEP, RFE025

FIG.131 CARRIER ISOLATED, DELX SWEEP, RFE025

FIG.131 CARRIER ISOLATED, DELX SWEEP, RFE025

FIG.131 CARRIER ISOLATED, DELX SWEEP, RFE025

LTV44-559(CA26) 747/1 ATY   (RFE025)

FIG.131 CARRIER ISOLATED, DELX SWEEP, RFE025

SYMBOL   MACH   PARAMETRIC VALUES
  ○   .602   ALPHAC   2.000   BETAC   .000
                    STAB   5.000   RUDDER   .000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.131 CARRIER ISOLATED, DELX SWEEP, RFE025

FIG.132 CARRIER ISOLATED, RFE026

SYMBOL   MACH   PARAMETRIC VALUES
  O   .608   BETAC   .000   STAB   -1.000
                  RUDDER   .000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.132 CARRIER ISOLATED, RFE026

SYMBOL　MACH　　　　PARAMETRIC VALUES

O　　　.608　　BETAC　　　.000　STAB　　　-1.000
　　　　　　　RUDDER　　　.000

REFERENCE INFORMATION

SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

FIG.132 CARRIER ISOLATED, RFE026

FIG.132 CARRIER ISOLATED; RFE026

LTV44-559(CA26) 747/1   (RFE026)

SYMBOL   MACH   PARAMETRIC VALUES
O   .608   BETAC   .000   STAB   -1.000
                RUDDER   .000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.132 CARRIER ISOLATED, RFE026

LTV44-559(CA26) 747/1   (RFE026)

FIG.132 CARRIER ISOLATED, RFE026

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FIG.132 CARRIER ISOLATED, RFE026

FIG.132 CARRIER ISOLATED, RFE026

LTV44-559(CA26) 747/1   (RFE027)

FIG.133 CARRIER ISOLATED, RFE027

FIG.133 CARRIER ISOLATED, RFE027

FIG.133 CARRIER ISOLATED. RFE027

SYMBOL   MACH   PARAMETRIC VALUES

O   .604   BETAC   .000   STAB   3.000
             RUDDER   .000

REFERENCE INFORMATION

SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

FIG.133 CARRIER ISOLATED, RFE027

FIG.133 CARRIER ISOLATED, RFE027

FIG.133 CARRIER ISOLATED, RFE027

FIG.133 CARRIER ISOLATED, RFE027

SYMBOL   MACH   PARAMETRIC VALUES

O   .604   BETAC   .000   STAB   3.000
               RUDDER   .000

REFERENCE INFORMATION

SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

FIG.133 CARRIER ISOLATED, RFE027

LTV44-559(CA26) 747/1   (RFE028)

FIG.134 CARRIER ISOLATED, RFE028

FIG.134 CARRIER ISOLATED, RFE028

FIG.134 CARRIER ISOLATED, RFE028

SYMBOL   MACH   PARAMETRIC VALUES
  O   .606   BETAC   .000   STAB   5.000
                  RUDDER   .000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.134 CARRIER ISOLATED, RFE028

LTV44-559(CA26) 747/1   (RFE028)

SYMBOL	MACH		PARAMETRIC VALUES		
O	.606	BETAC	.000	STAB	5.000
		RUDDER	.000		

REFERENCE INFORMATION

SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

FIG.134 CARRIER ISOLATED, RFE028

FIG.134 CARRIER ISOLATED, RFE028

SYMBOL   MACH   PARAMETRIC VALUES
   O   .606   BETAC   .000   STAB   5.000
                  RUDDER   .000

REFERENCE INFORMATION

SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

FIG.134 CARRIER ISOLATED, RFE028

FIG.134 CARRIER ISOLATED, RFE028

FIG.135 CARRIER ISOLATED, RFE029

SYMBOL   MACH   PARAMETRIC VALUES
  O   .601   BETAC   .000   RUDDER   .000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.135 CARRIER ISOLATED, RFE029

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LTV44-559(CA26) 747/4   (RFE029)

SYMBOL   MACH   PARAMETRIC VALUES
O   .601   BETAC   .000   RUDDER   .000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.135 CARRIER ISOLATED, RFE029

FIG.135 CARRIER ISOLATED, RFE029

LTV44-559(CA26) 747/4   (RFE029)

FIG.135 CARRIER ISOLATED, RFE029

FIG.135 CARRIER ISOLATED, RFE029

LTV44-559(CA26) 747/4   (RFE029)

FIG.135 CARRIER ISOLATED, RFE029

LTV44-559(CA26) 747/4   (RFE029)

FIG.135 CARRIER ISOLATED, RFE029

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE030)

FIG.136 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=4, BETAC=0, BETAO=0, RFE030

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE030)

FIG.136 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=4,BETAC=0,BETAO=0, RFE030

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE030)

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.627	ALPHAC	.000	BETAC	.000	SREF	5500.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000	LREF	327.7800	IN.
		BDFLAP	.000	DX	.000	BREF	2348.0400	IN.
		DY	.000	IORB	4.000	XMRP	1339.9000	IN. XC
		BETAO	.000	RUDDER	.000	YMRP	.0000	IN. YC
						ZMRP	190.7500	IN. ZC
						SCALE	.0125	

FIG.136 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=4,BETAC=0,BETAO=0, RFE030

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE030)

FIG.136 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=4,BETAC=0,BETA0=0, RFE030

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE030)

FIG.136 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=4,BETAC=0,BETAO=0, RFE030

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE030)

FIG.136 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=4,BETAC=0,BETAO=0, RFE030

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE030)

SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.627	ALPHAC	.000	BETAC	.000	SREF	5500.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000	LREF	327.7800	IN.
.		BDFLAP	.000	DX	.000	BREF	2348.0400	IN.
		DY	.000	IORB	4.000	XMRP	1339.9000	IN. XC
		BETAO	.000	RUDDER	.000	YMRP	.0000	IN. YC
						ZMRP	190.7500	IN. ZC
						SCALE	.0125	

FIG.136 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=4,BETAC=0,BETAO=0, RFE030

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE030)

FIG.136 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=4, BETAC=0, BETAO=0, RFE030

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE031)

SYMBOL	MACH	PARAMETRIC VALUES			
O	.622	ALPHAC	.000	BETAC	.000
		STAB	5.000	ELEVON	5.000
		BDFLAP	.000	DX	.000
		DY	.000	IORB	6.000
		BETAO	.000	RUDDER	.000

REFERENCE INFORMATION
SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

NORMAL FORCE COEFFICIENT, CN

ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG.137 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=6, BETAC=0, BETAO=0, RFE031

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE031)

FIG.137 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE031

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO31)

FIG.137 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFEO31

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE031)

SYMBOL   MACH
  O   .622

PARAMETRIC VALUES

ALPHAC	.000	BETAC	.000
STAB	5.000	ELEVON	5.000
BDFLAP	.000	DX	.000
DY	.000	IORB	6.000
BETAO	.000	RUDDER	.000

REFERENCE INFORMATION

SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

SIDE FORCE COEFFICIENT, CY

ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG.137 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE031

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LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO31)

FIG.137 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFEO31

FIG.137 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE031

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO31)

FIG.137 CARRIER DATA. ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFEO31

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE031)

FIG.137 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE031

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE032)

FIG.138 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE032

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE032)

FIG.138 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE032

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE032)

SYMBOL	MACH		PARAMETRIC VALUES		
○	.622	ALPHAC	.000	BETAC	.000
		STAB	5.000	ELEVON	5.000
		BDFLAP	.000	DX	.000
		DY	.000	IORB	6.000
		BETAO	.000	RUDDER	.000

REFERENCE INFORMATION

SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

FIG.138 CARRIER DATA, ORB. PROXIMITY, ALPHAC=O, IORB=6, BETAC=O, BETAO=O, RFE032

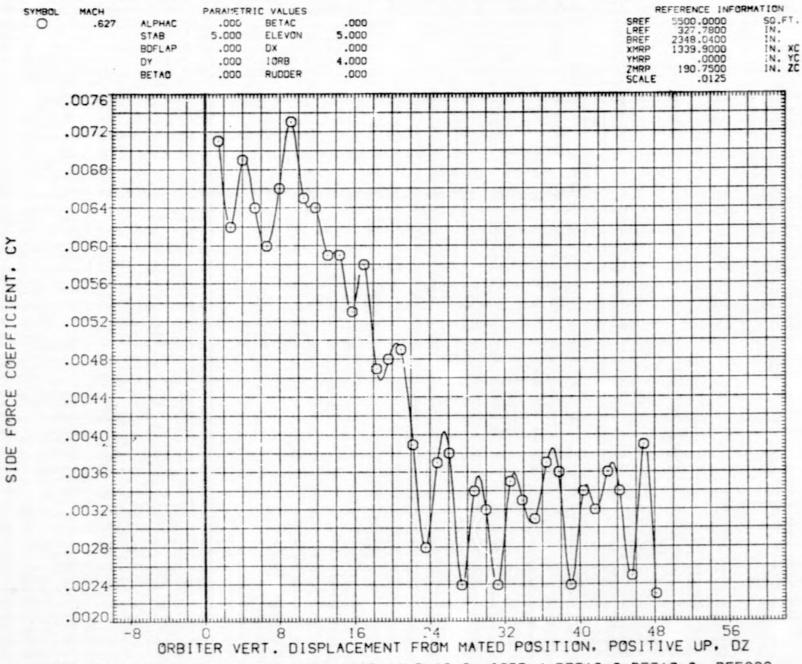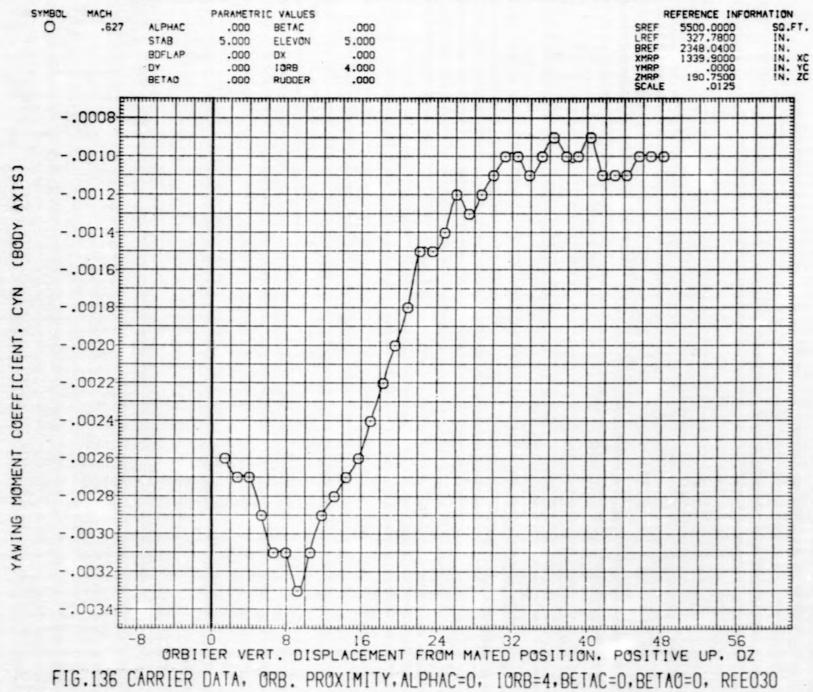LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE032)

FIG.138 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=6, BETAC=0, BETAO=0, RFE032

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE032)

FIG.138 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETA0=0, RFE032

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SYMBOL   MACH

PARAMETRIC VALUES

REFERENCE INFORMATION

○	.622	ALPHAC	.000	BETAC	.000	
		STAB	5.000	ELEVON	5.000	
		BDFLAP	.000	DX	.000	
		DY	.000	IORB	6.000	
		BETAO	.000	RUDDER	.000	

SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG.138 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE032

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO32)

FIG.138 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=6, BETAC=0, BETAO=0, RFEO32
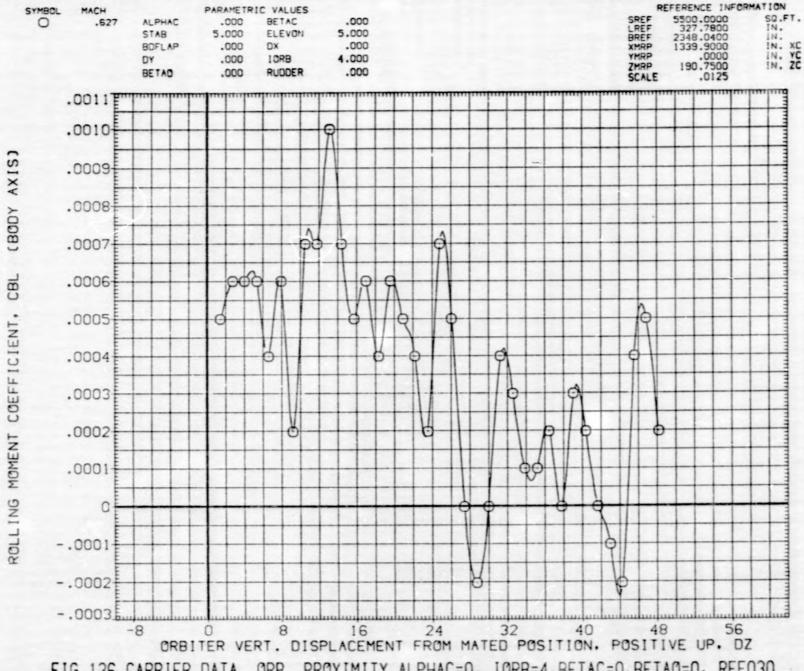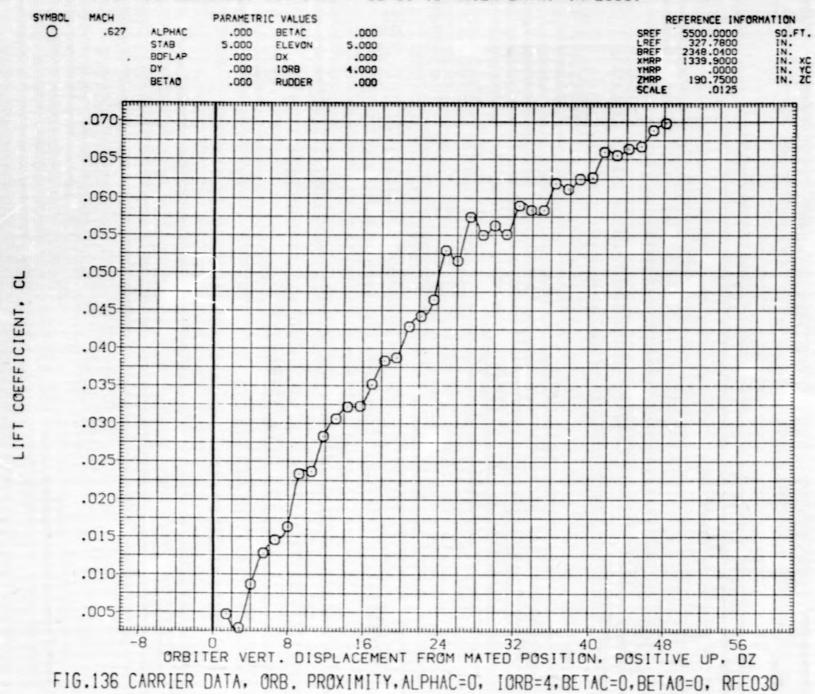
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE032)
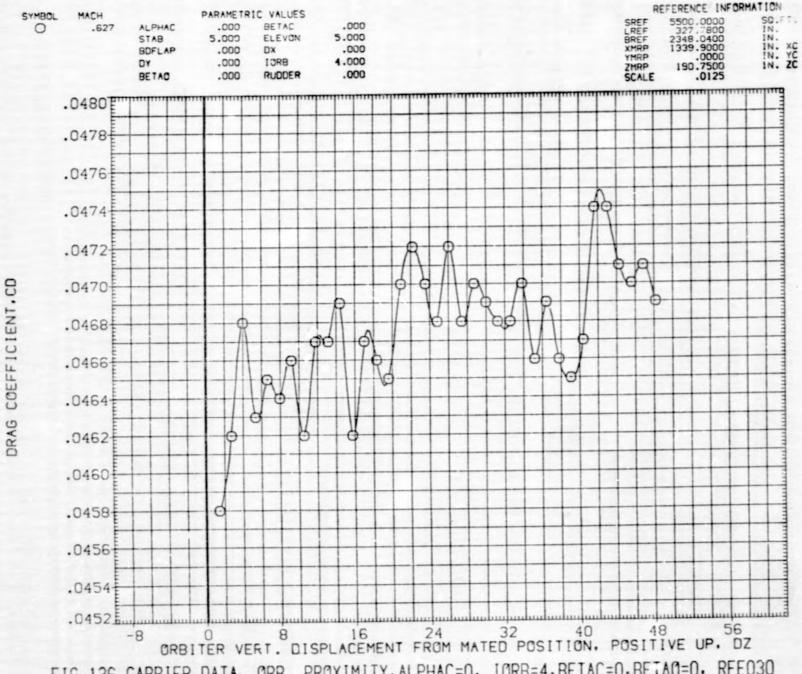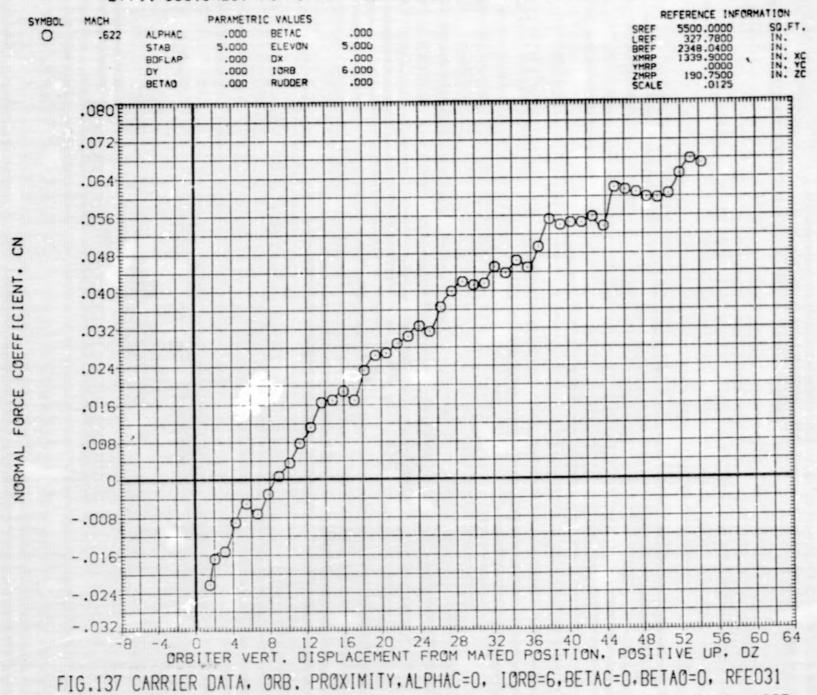
FIG.138 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE032

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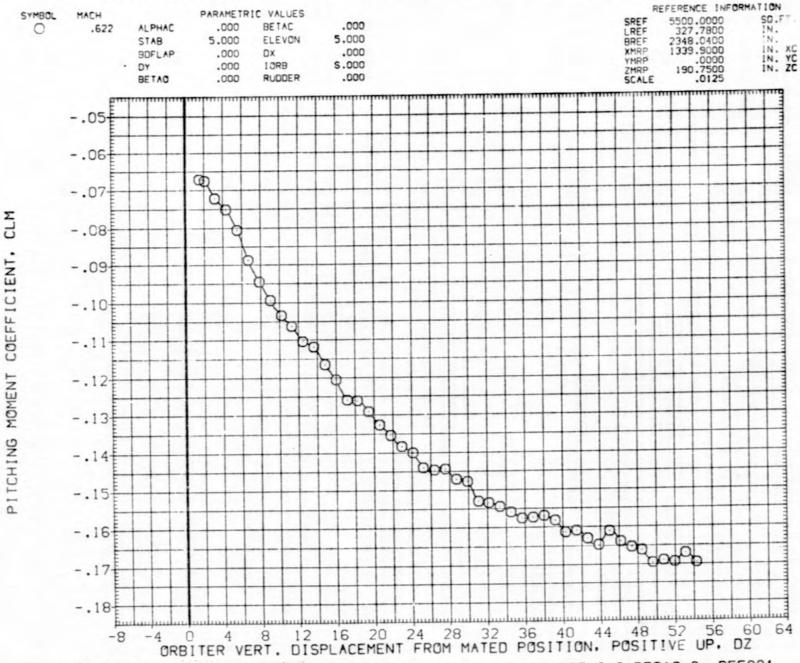
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE033)

FIG.139 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE033

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE033)
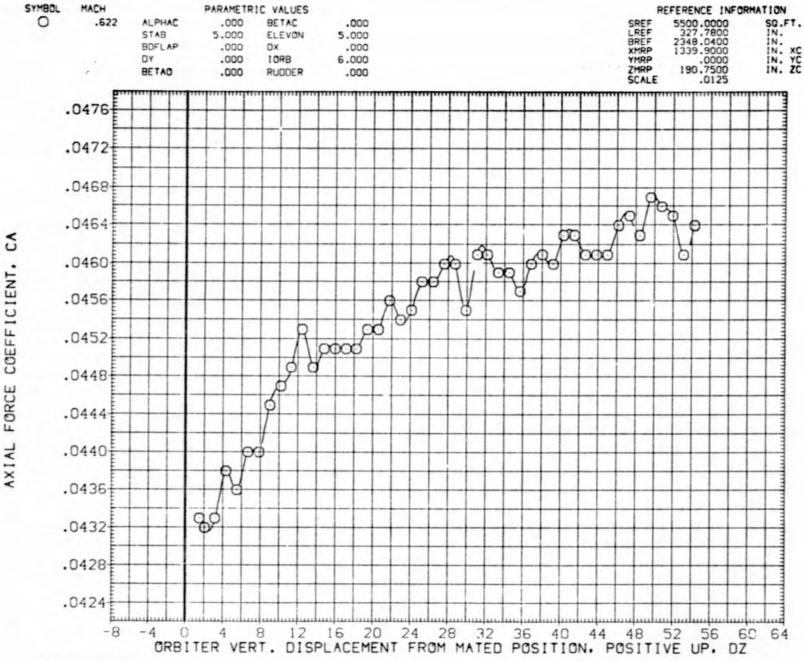
FIG.139 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE033

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE033)

FIG.139 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE033

SYMBOL	MACH		PARAMETRIC VALUES		
O	.617	ALPHAC	.000	BETAC	.000
		STAB	5.000	ELEVON	5.000
		BDFLAP	.000	DX	.000
		DY	.000	IORB	6.000
		BETAO	.000	RUDDER	.000

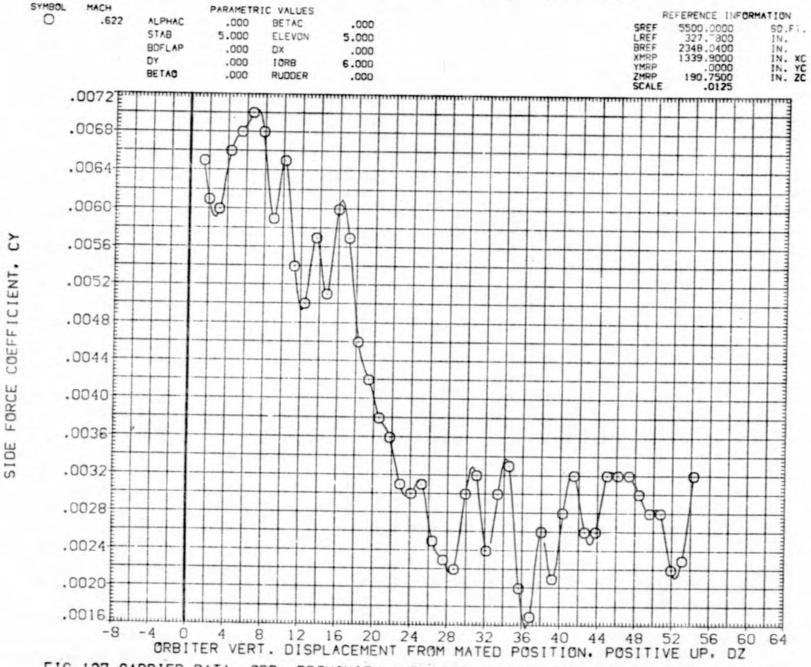| REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

FIG.139 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE033

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE033)

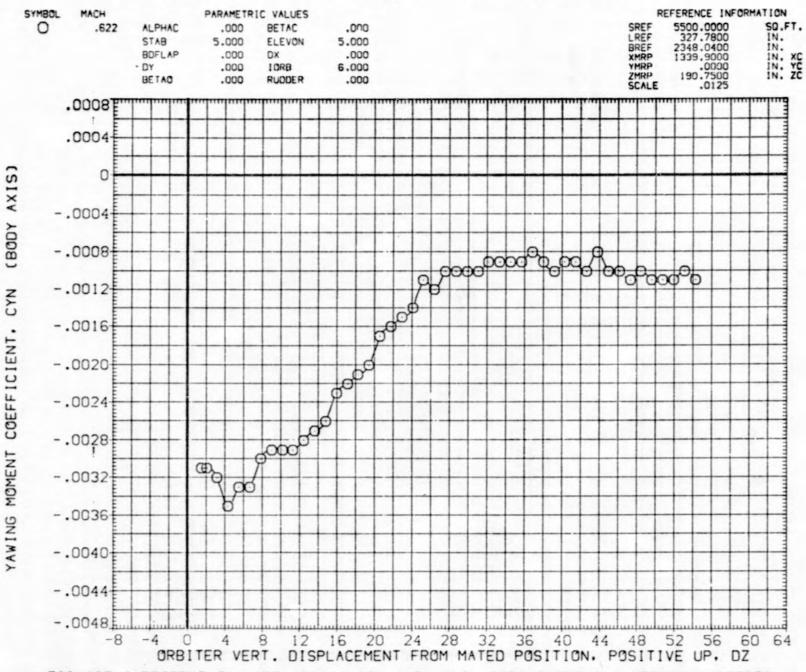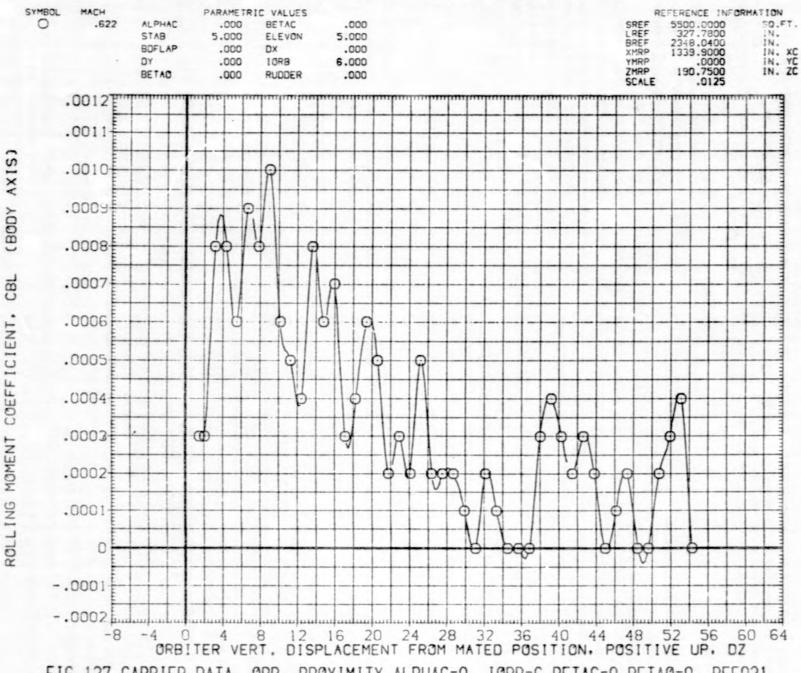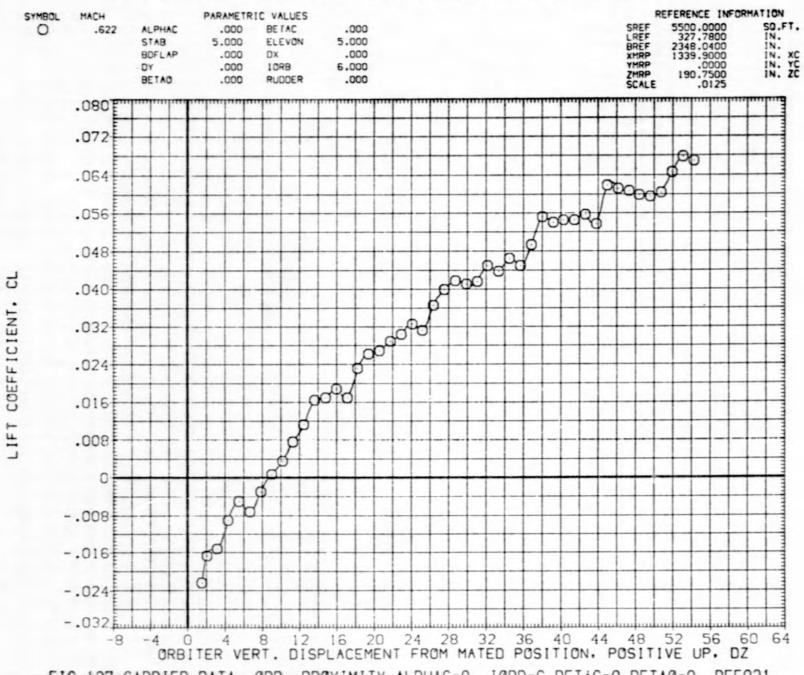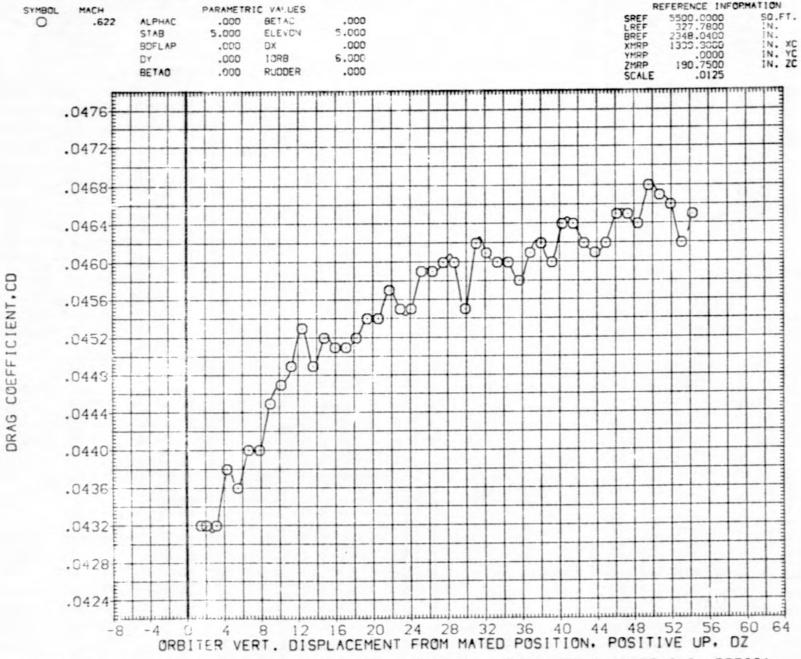FIG.139 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE033

SYMBOL   MACH   PARAMETRIC VALUES   REFERENCE INFORMATION

O   .617   ALPHAC   .000   BETAC   .000   SREF   5500.0000   SQ.FT.
                  STAB   5.000   ELEVON   5.000   LREF   327.7800   IN.
                  BOFLAP   .000   DX   .000   BREF   2348.0400   IN.
                  DY   .000   IORB   6.000   XMRP   1339.9000   IN. XC
                  BETAO   .000   RUDDER   .000   YMRP   .0000   IN. YC
                                                            ZMRP   190.7500   IN. ZC
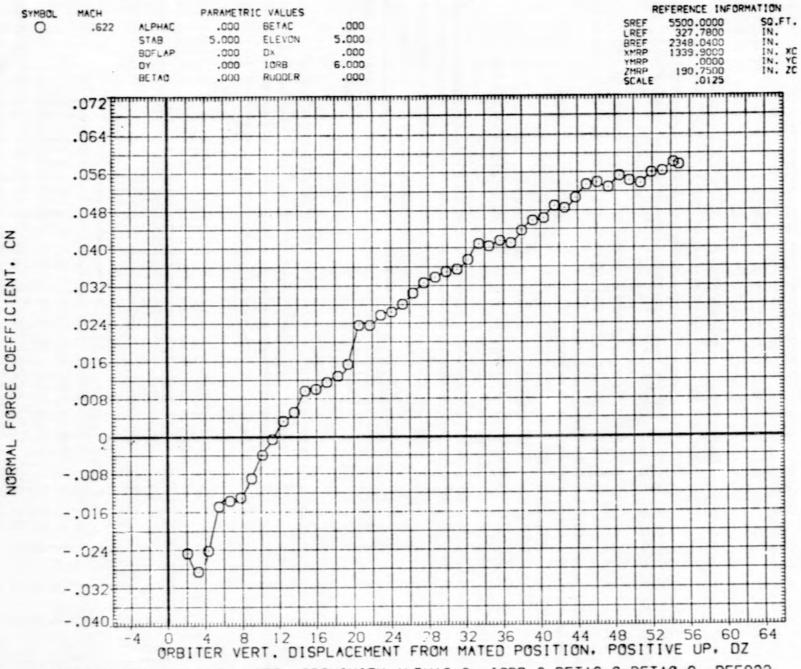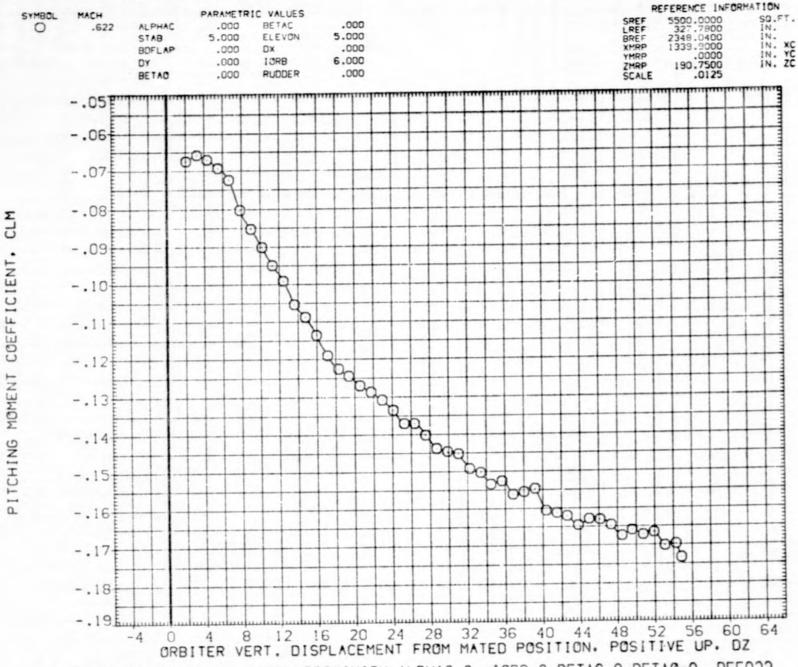   SCALE   .0125

FIG.139 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE033
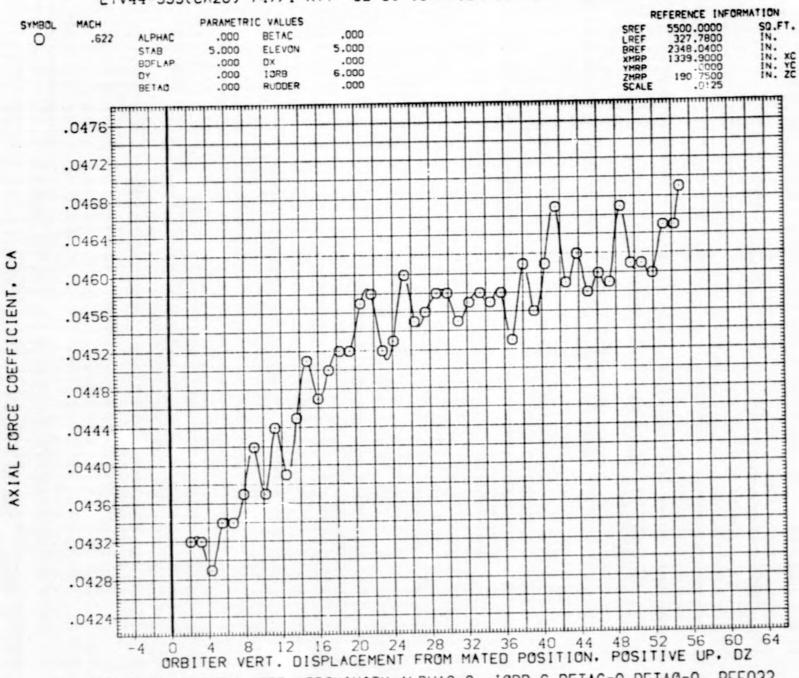
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE033)

FIG.139 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE033

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE033)

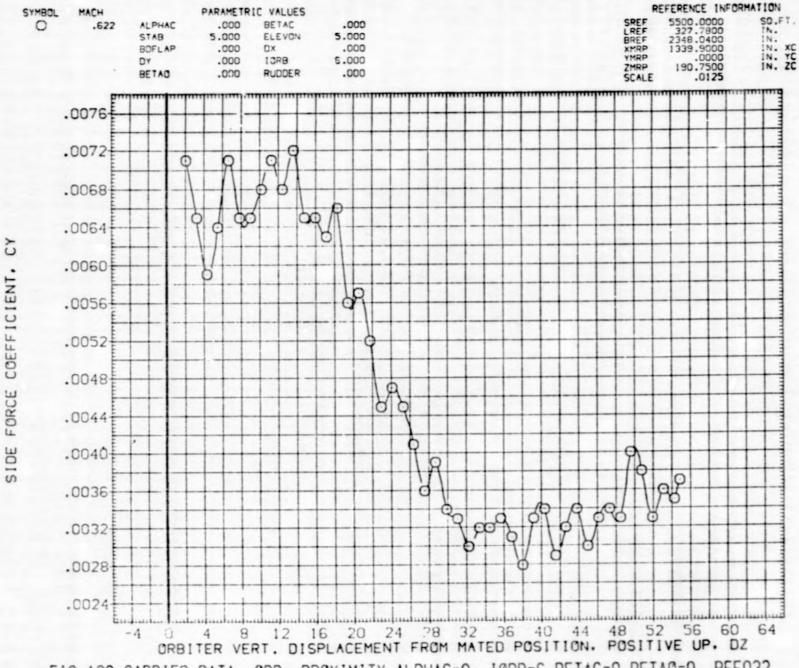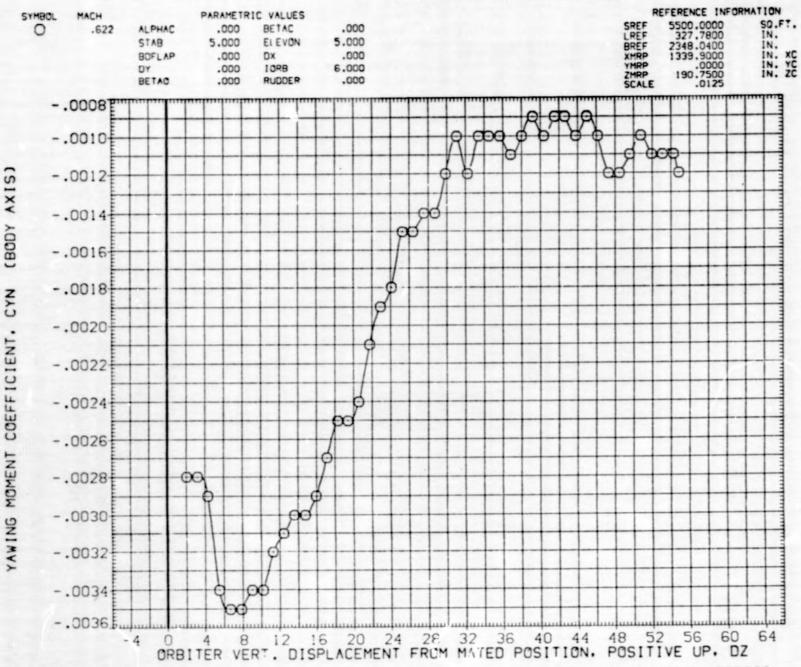FIG.139 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE033

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FIG.140 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=8, BETAC=0, BETAO=0, RFE034

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE034)

FIG.140 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=8, BETAC=0, BETAO=0, RFE034

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE034)

FIG.140 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=0, RFE034

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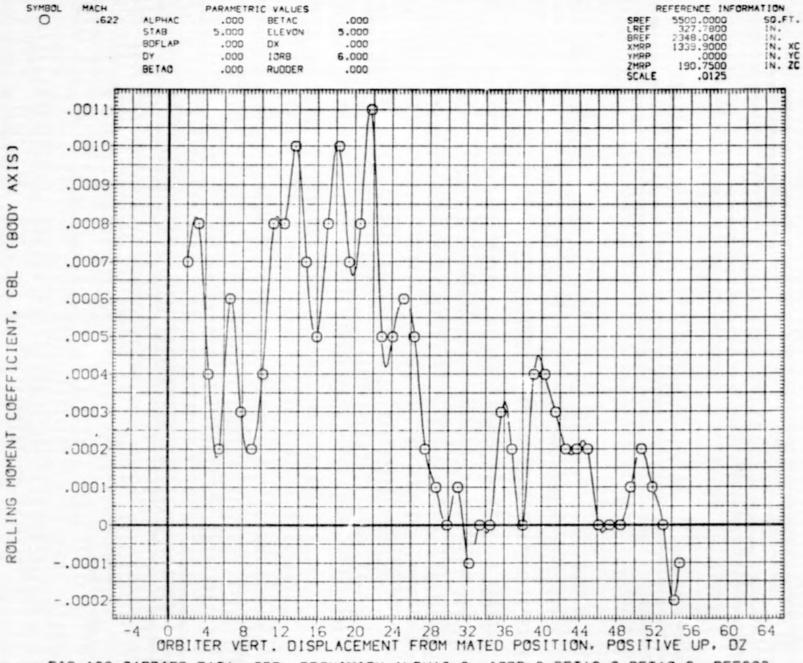
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE034)

FIG.140 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=8, BETAC=0, BETAO=0, RFE034

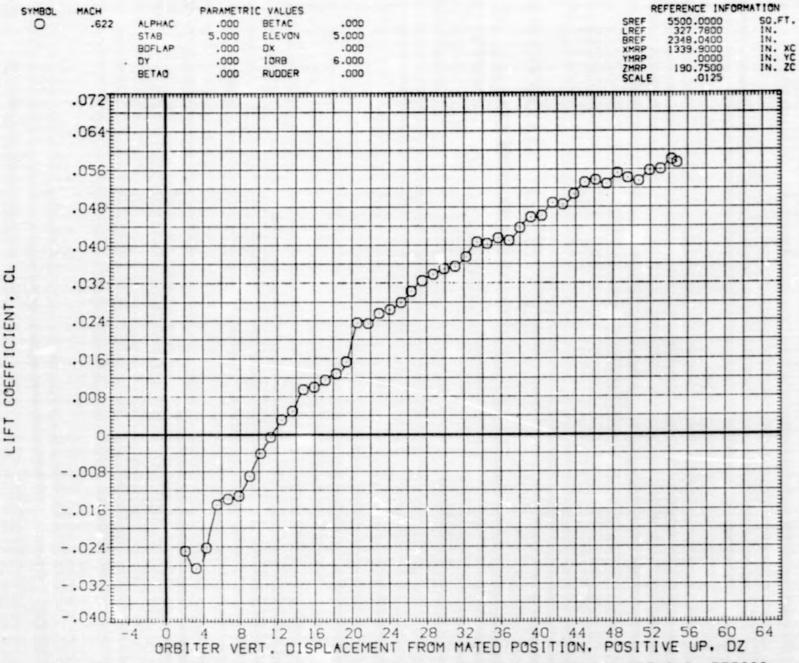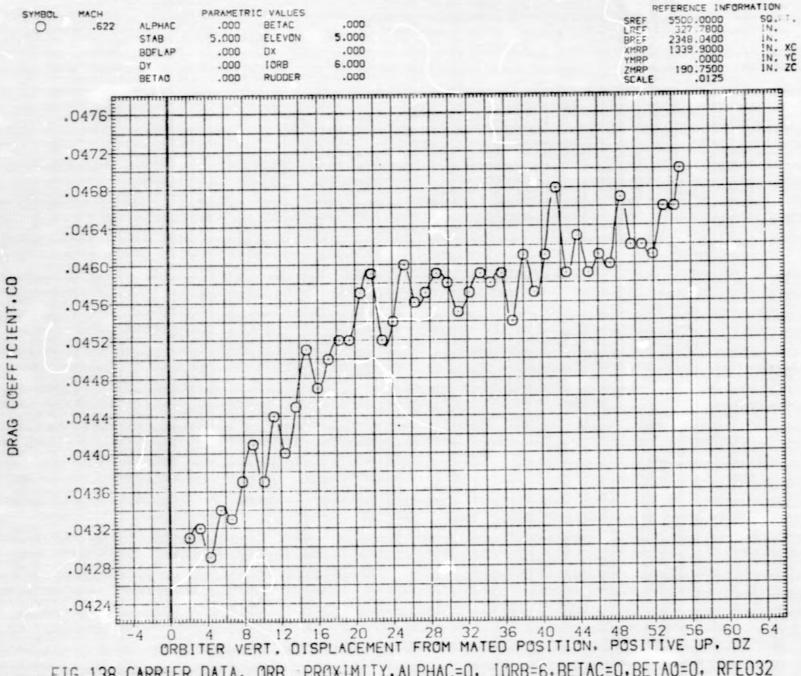LTV44-559(CA26) 747/1 ATY O2 SI (CARRIER DATA) (RFE034)

FIG.140 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=8, BETAC=0, BETAO=0, RFE034

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE034)

FIG.140 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=8, BETAC=0, BETAO=0, RFE034

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE034)

FIG.140 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=0, RFE034

FIG.140 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=0, RFE034

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE035)

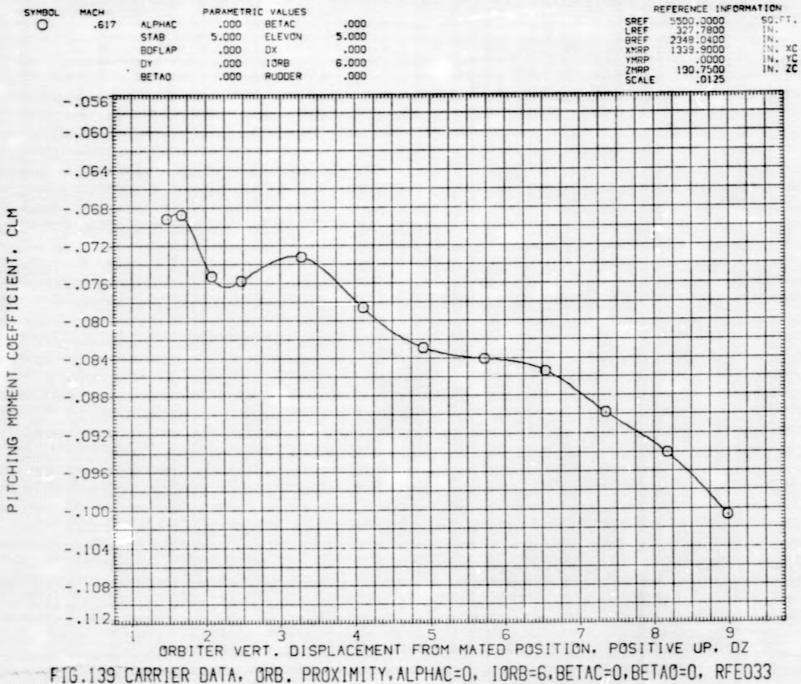FIG.141 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=4,BETAC=0,BETAO=5, RFE035

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO35)

FIG.141 CARRIER DATA, ORB. PROXIMITY,ALPHAC=O, IORB=4,BETAC=0,BETAO=5, RFEO35

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE035)

FIG.141 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=4,BETAC=0,BETAO=5, RFE035

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE035)

FIG.141 CARRIER DATA, ORB. PROXIMITY,ALPHAC=O, IORB=4,BETAC=O,BETAO=5, RFE035
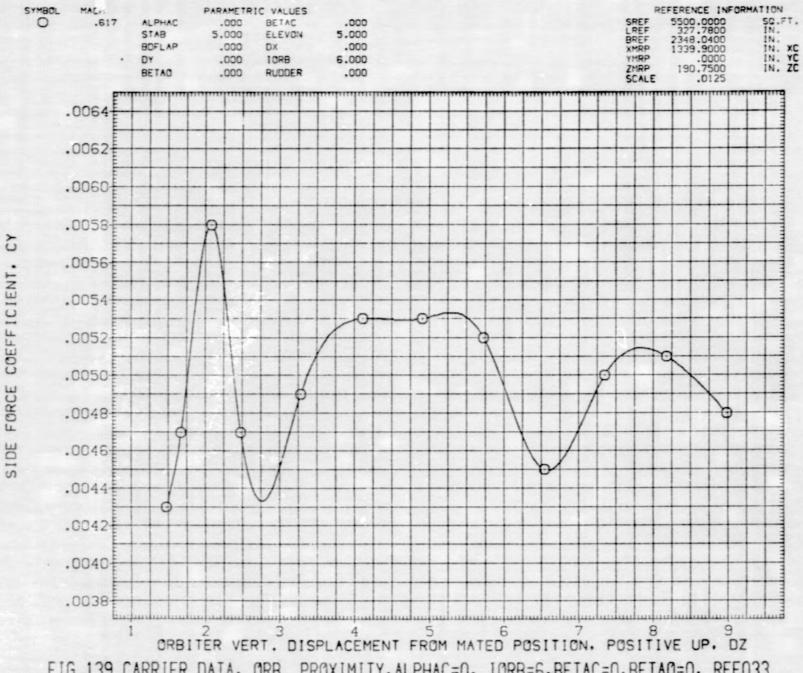
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE035)

FIG.141 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=4,BETAC=0,BETAO=5, RFE035
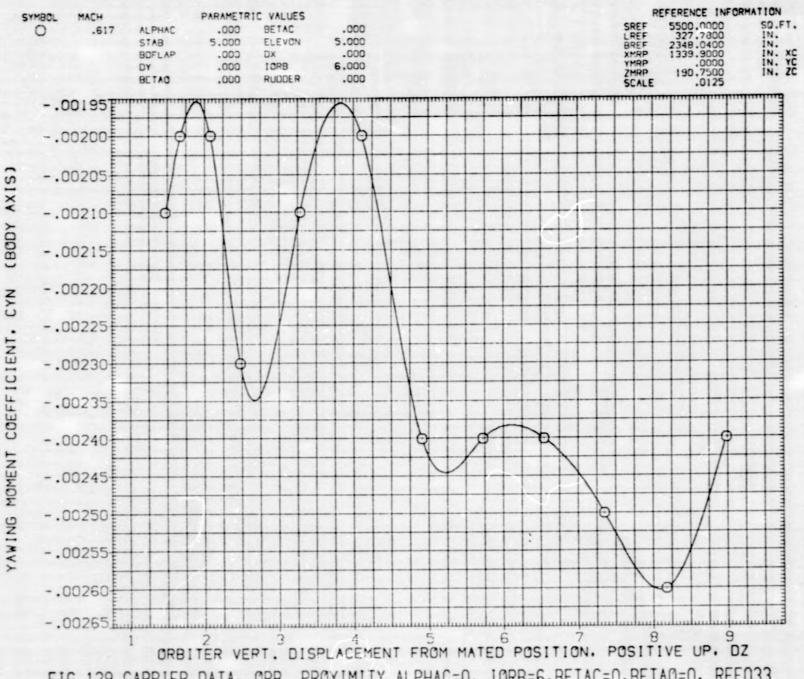
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE035)
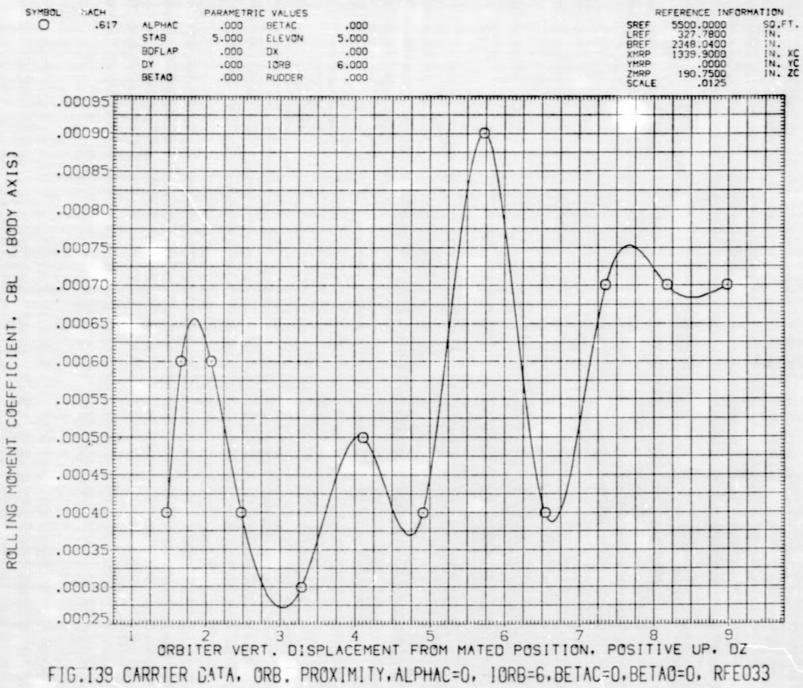
FIG.141 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=4, BETAC=0, BETAO=5, RFE035

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE035)

FIG.141 CARRIER DATA. ORB. PROXIMITY.ALPHAC=O, IORB=4.BETAC=0.BETAO=5, RFE035

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE035)

FIG.141 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=4,BETAC=0,BETAO=5, RFE035

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE036)

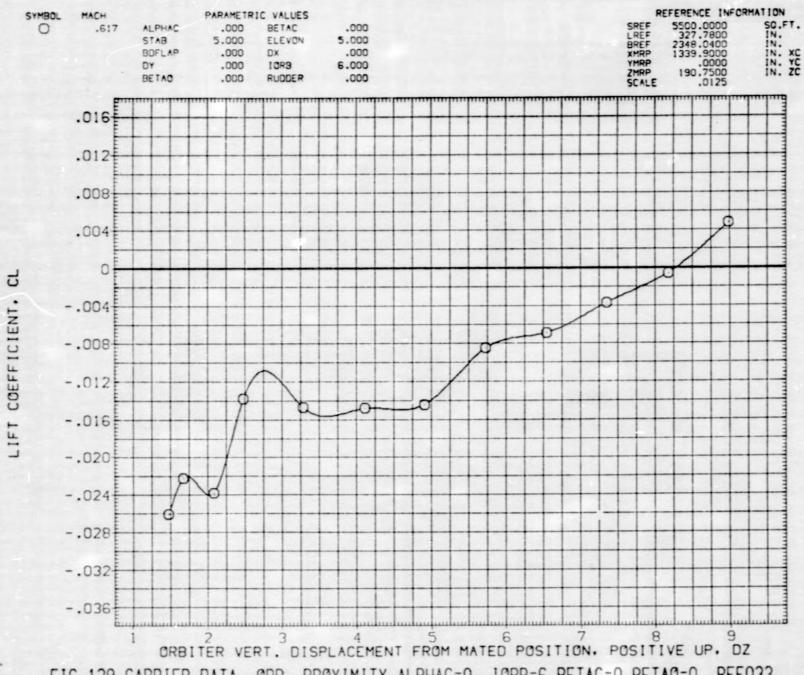FIG.142 CARRIER DATA, ORB. PROXIMITY.ALPHAC=0, IORB=6,BETAC=0,BETAO=5, RFE036

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE036)

FIG.142 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=6, BETAC=0, BETAO=5, RFE036
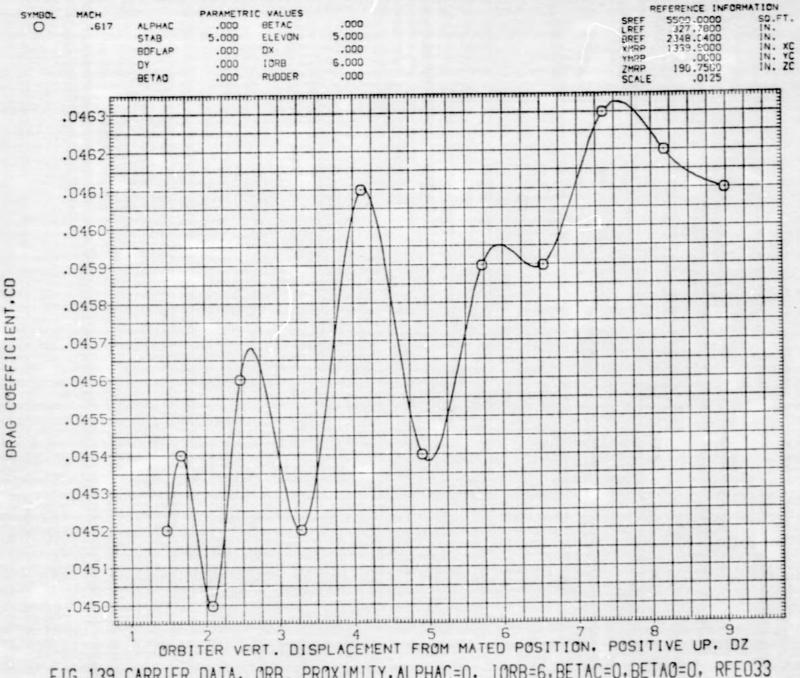
LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO36)

FIG.142 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=5, RFEO36

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO36)

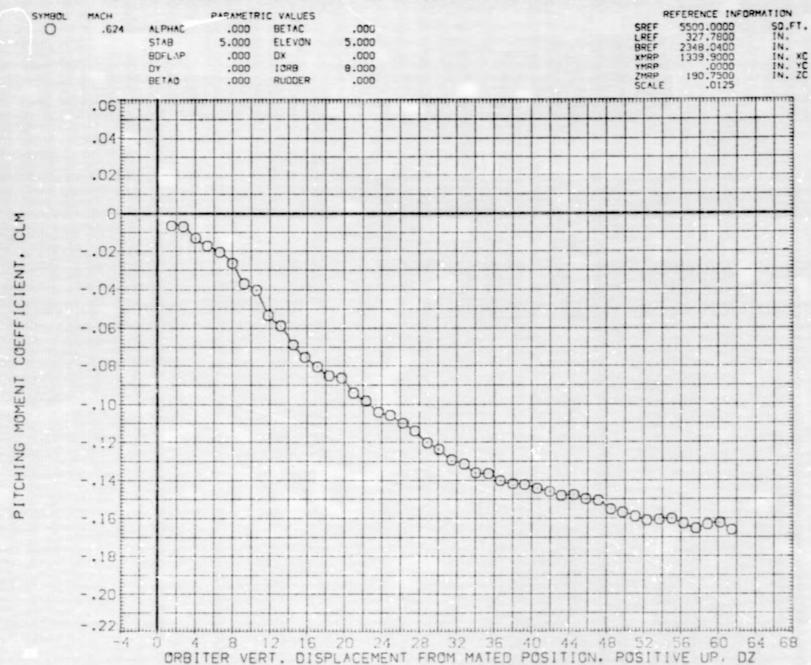FIG.142 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=5, RFEO36

FIG.142 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=5, RFE036
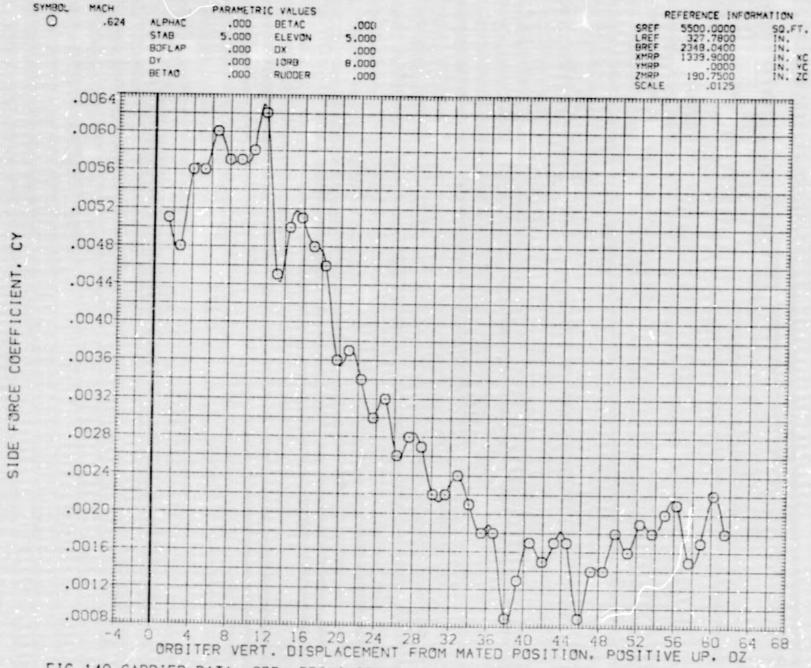
LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE036)

FIG.142 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=5, RFE036
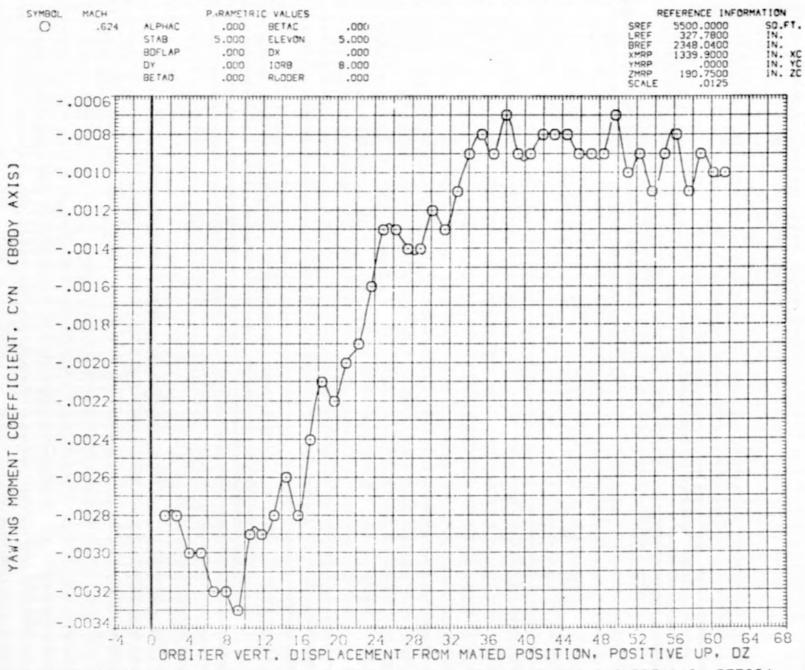
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE036)

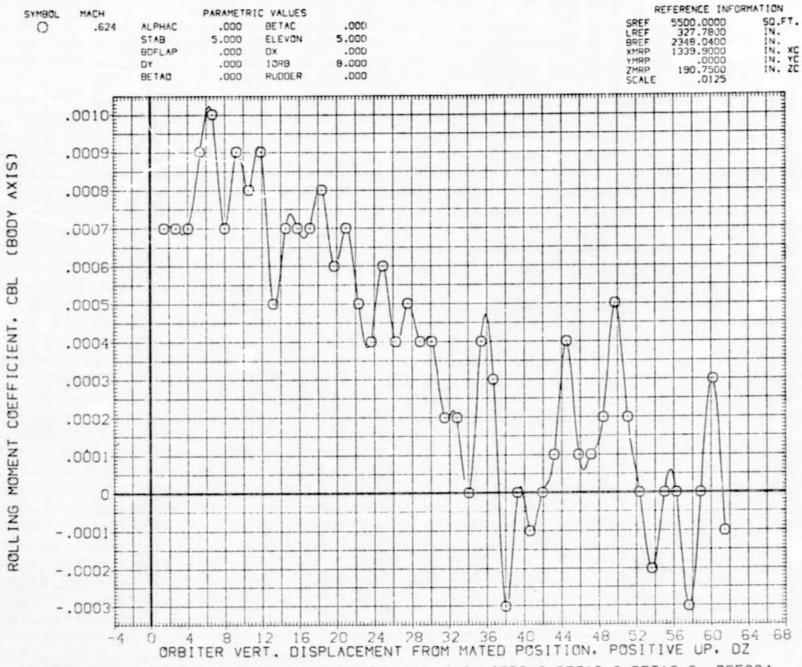FIG.142 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=5, RFE036

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE036)

SYMBOL   MACH   PARAMETRIC VALUES   REFERENCE INFORMATION
  O   .628   ALPHAC   .000   BETAC   .000   SREF   5500.0000   SQ.FT.
                  STAB   5.000   ELEVON   5.000   LREF   327.7800   IN.
                  BDFLAP   .000   DX   .000   BREF   2348.0400   IN.
                  DY   .000   IORB   6.000   XMRP   1339.9000   IN. XC
                  BETAO   5.000   RUDDER   .000   YMRP   .0000   IN. YC
                                                       ZMRP   190.7500   IN. ZC
                                                       SCALE   .0125

FIG.142 CARRIER DATA, ORB. PROXIMITY,ALPHAC=O, IORB=6,BETAC=O,BETAO=5, RFE036

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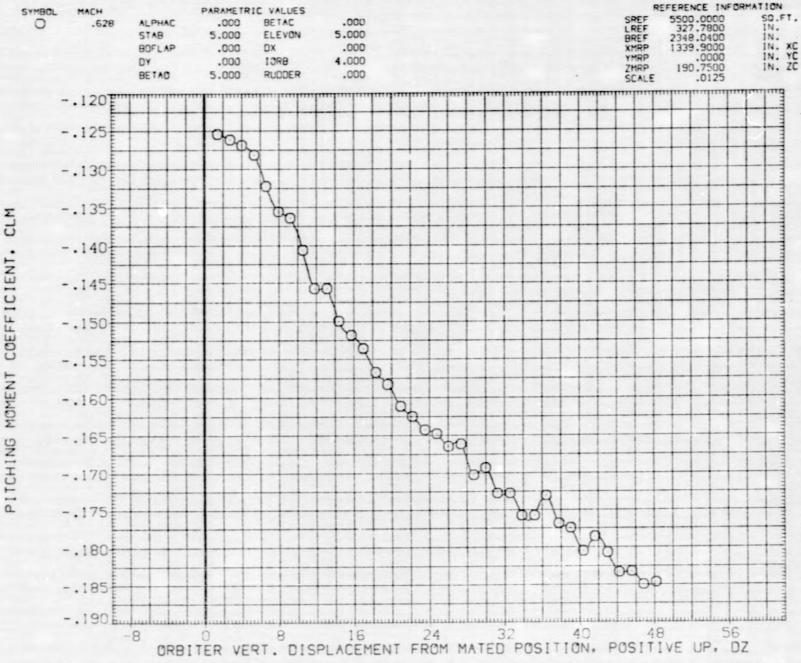
LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE037)

FIG.143 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=5, RFE037

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE037)
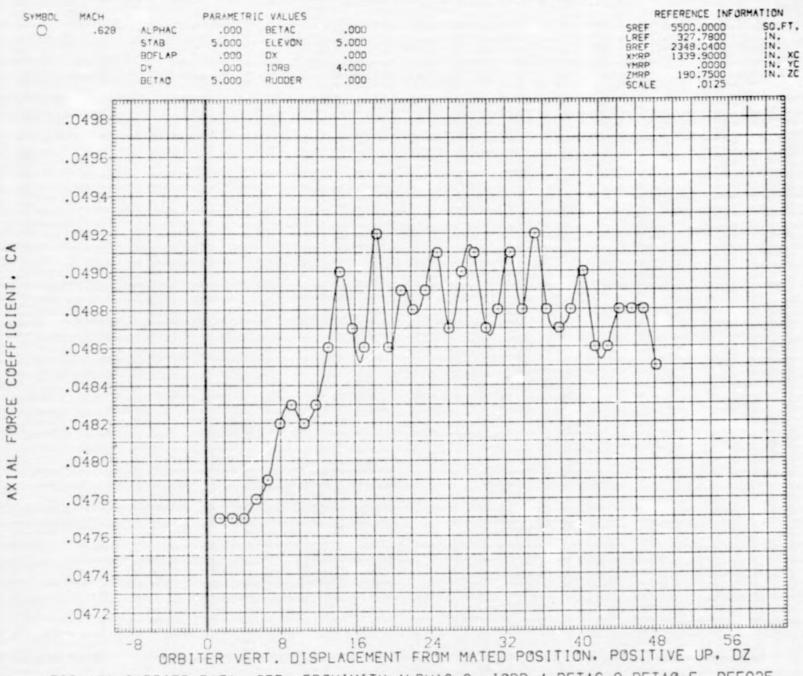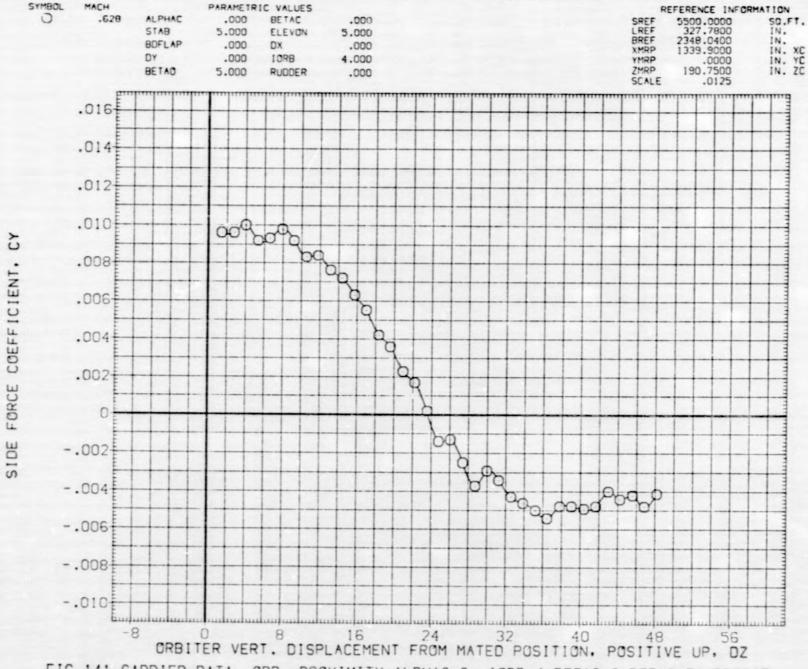
FIG.143 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=5, RFE037

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LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE037)

SYMBOL	MACH	PARAMETRIC VALUES			
O	.617	ALPHAC	.000	BETAC	.000
		STAB	5.000	ELEVON	5.000
		BDFLAP	.000	DX	.000
		DY	.000	IORB	8.000
		BETAO	5.000	RUDDER	.000

REFERENCE INFORMATION

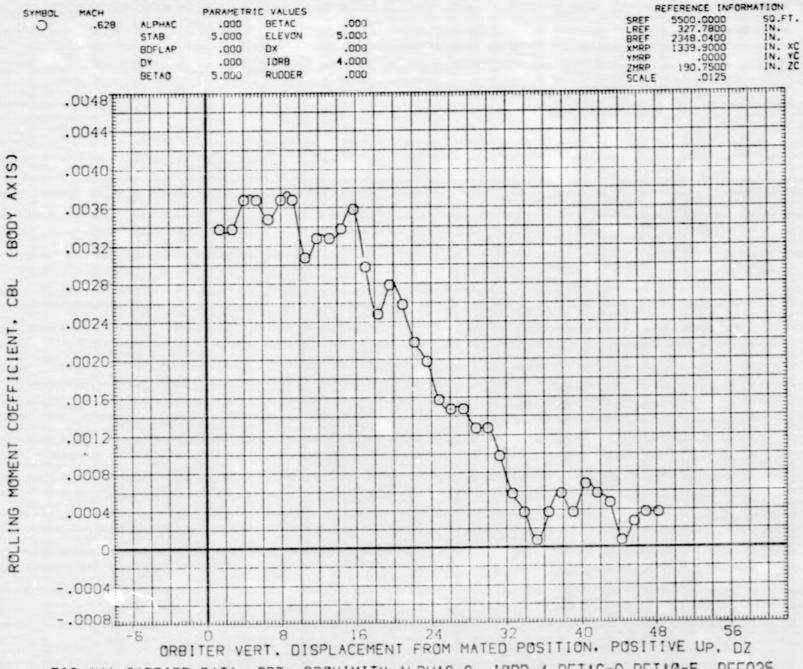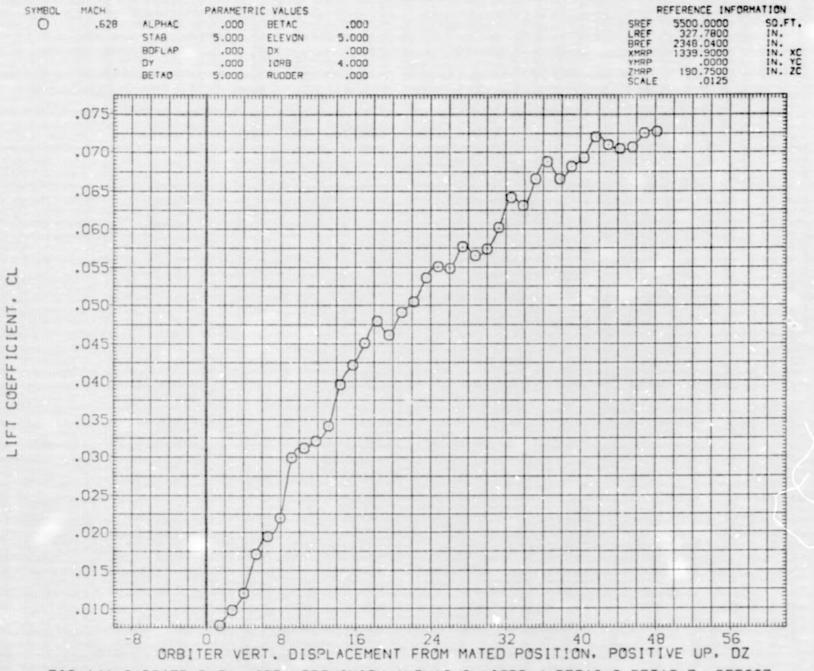| SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

FIG.143 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=5, RFE037

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LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE037)

SYMBOL	MACH	PARAMETRIC VALUES			
O	.617	ALPHAC	.000	BETAC	.000
		STAB	5.000	ELEVON	5.000
		BDFLAP	.000	DX	.000
		DY	.000	IORB	8.000
		BETAO	5.000	RUDDER	.000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
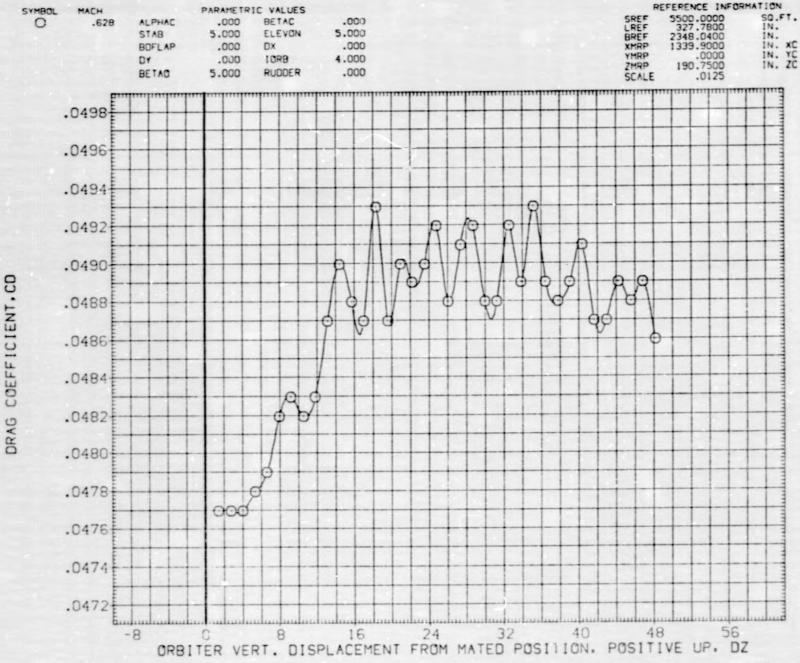ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.143 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=5, RFE037

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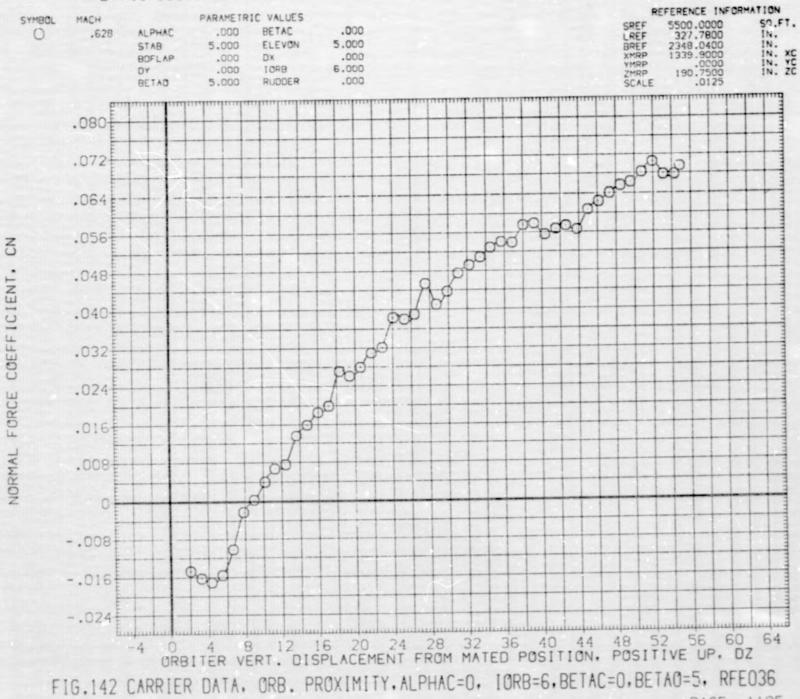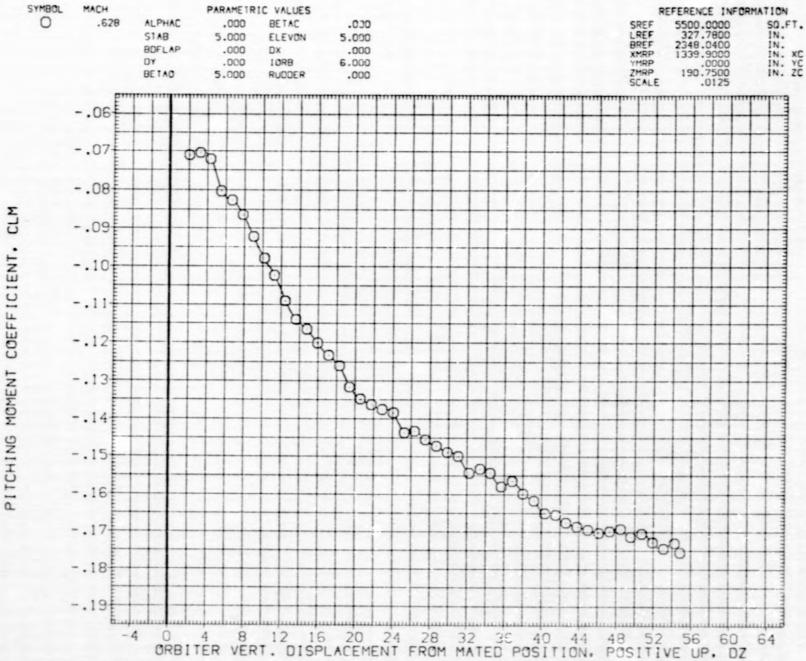LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO37)

FIG.143 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=5, RFEO37

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LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE037)

FIG.143 CARRIER DATA, ORB. PROXIMITY,ALPHAC=O, IORB=8,BETAC=O,BETAO=5, RFE037

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LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE037)

FIG.143 CARRIER DATA, ORB. PROXIMITY,ALPHAC=O, IORB=8,BETAC=0,BETAO=5, RFE037

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE037)

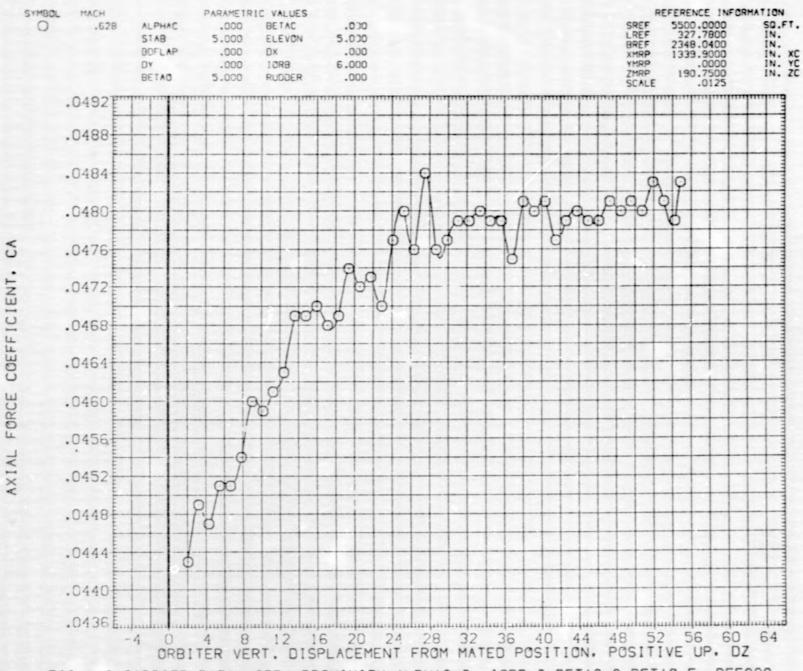FIG.143 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=5, RFE037

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE038)

FIG.144 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=4, BETAC=0, BETAO=0, RFE038
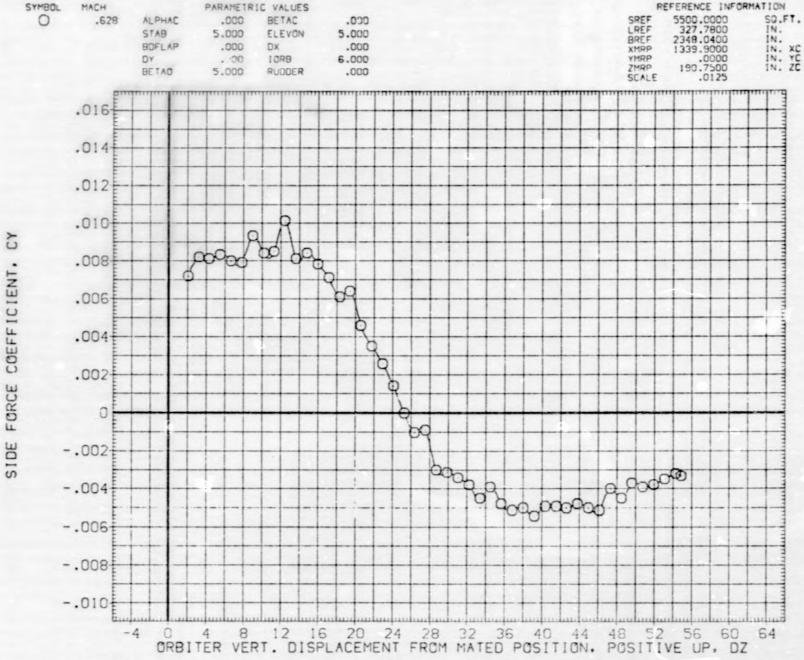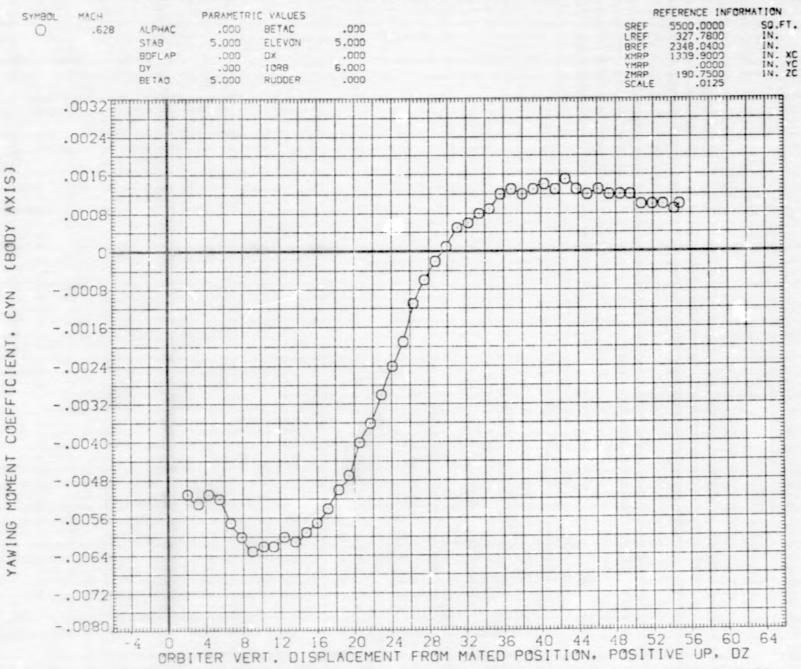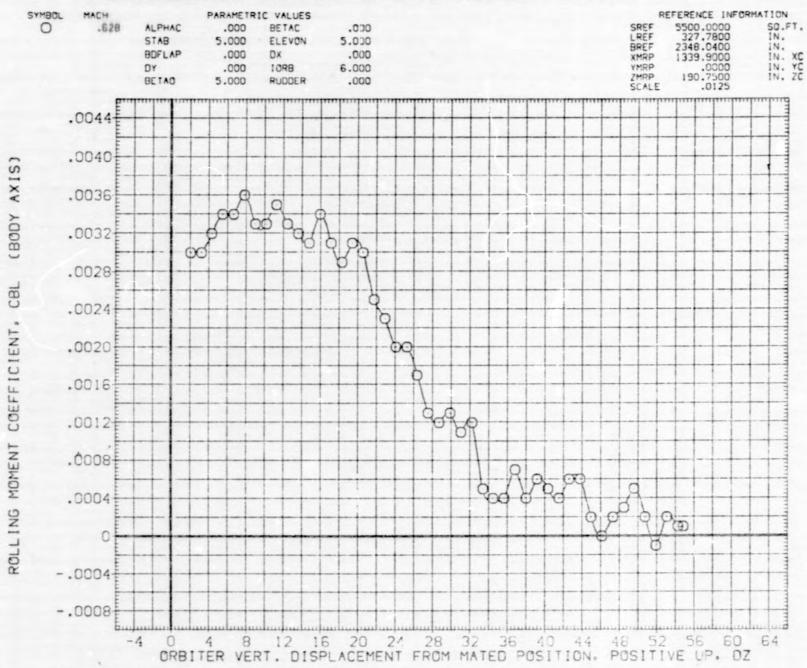
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE038)
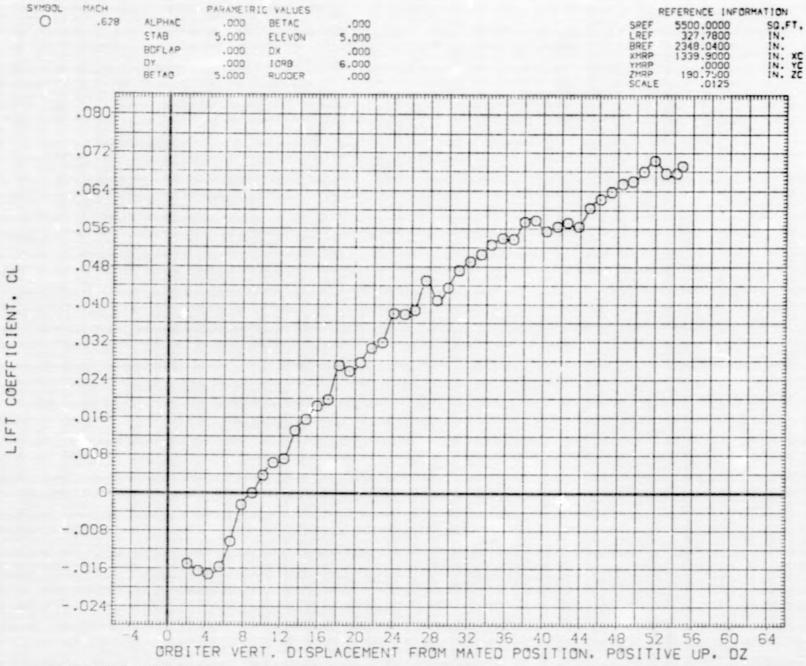
FIG.144 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=4, BETAC=0, BETAO=0, RFE038

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE038)

FIG.144 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=4,BETAC=0,BETAO=0, RFE038

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE038)

SYMBOL   MACH   PARAMETRIC VALUES   REFERENCE INFORMATION
  O   .625   ALPHAC   .000   BETAC   .000   SREF   5500.0000   SQ.FT.
                 STAB   -1.000   ELEVON   5.000   LREF   327.7800   IN.
                 BDFLAP   .000   DX   .000   BREF   2348.0400   IN.
                 DY   .000   IORB   4.000   XMRP   1339.9000   IN. XC
                 BETAO   .000   RUDDER   .000   YMRP   .0000   IN. YC
                                                       ZMRP   190.7500   IN. ZC
                                                       SCALE   .0125

FIG.144 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=4,BETAC=0,BETAO=0, RFE038

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE038)

FIG.144 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=4, BETAC=0, BETA0=0, RFE038

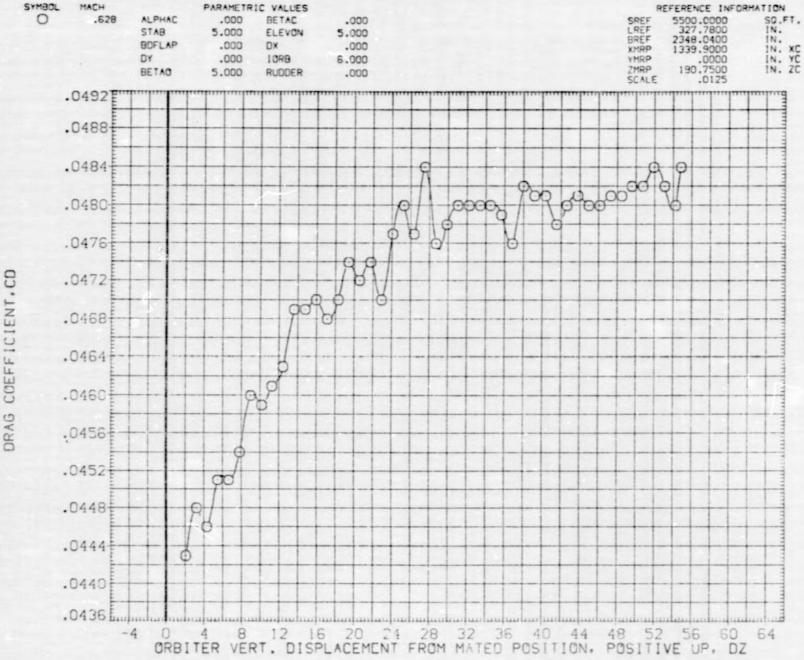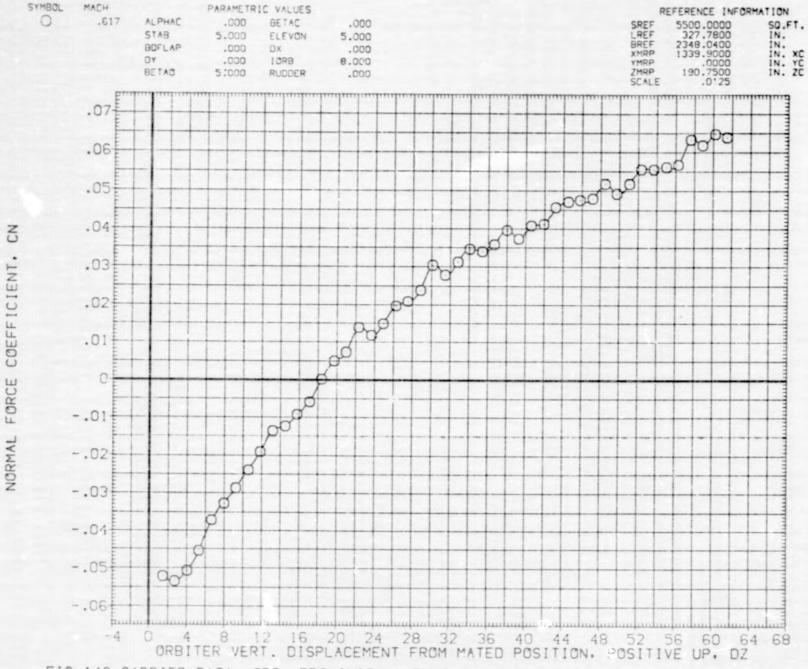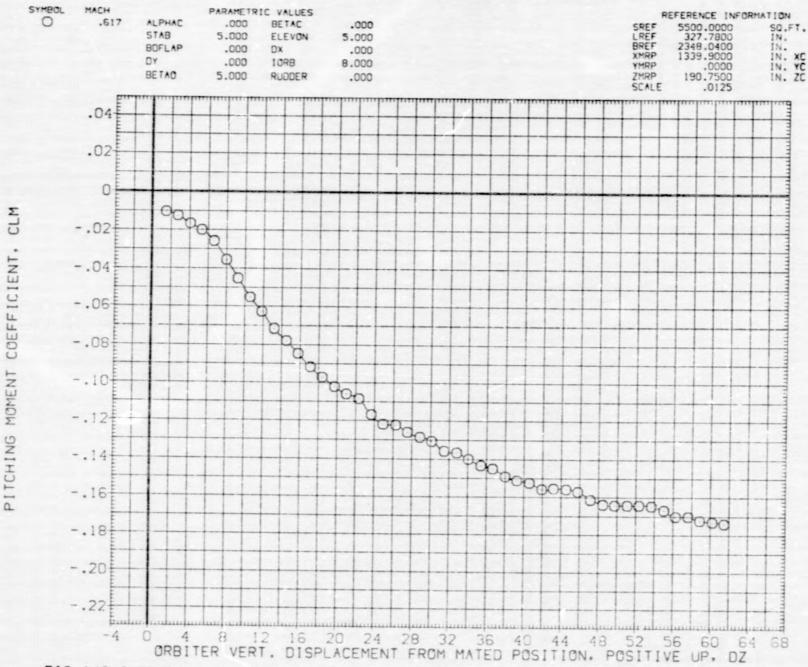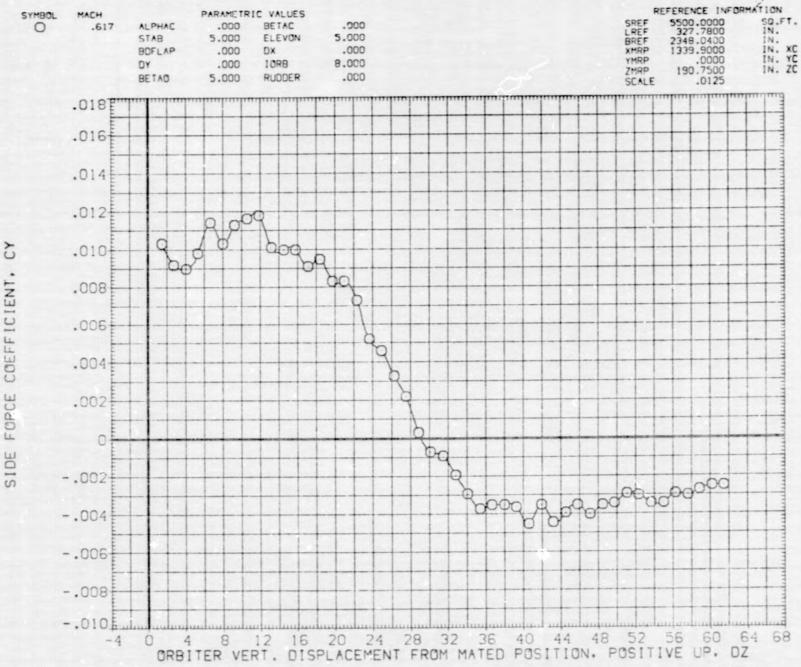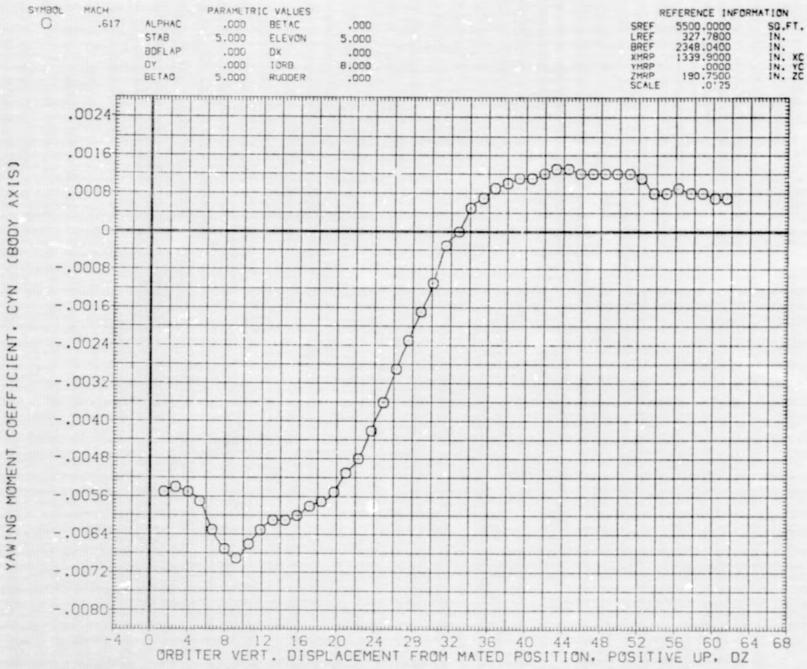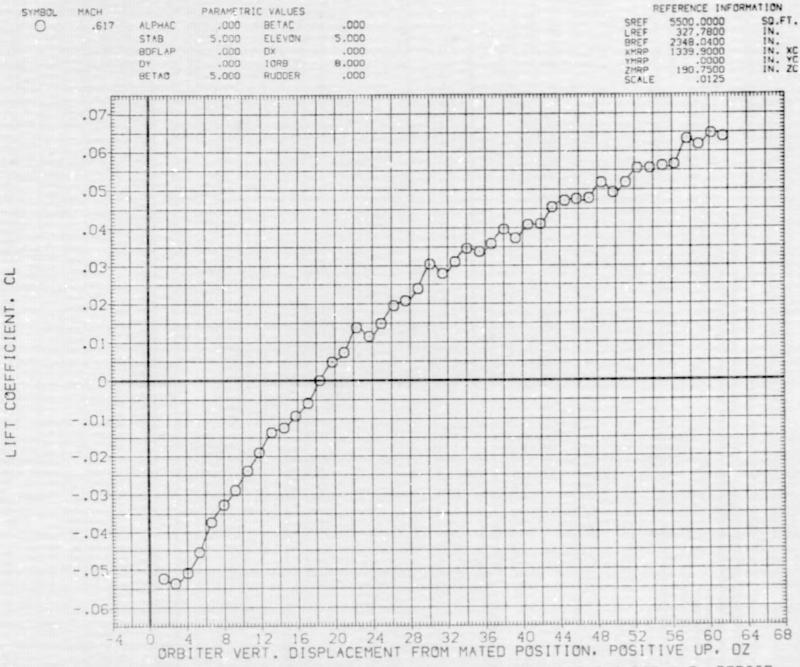LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO38)

FIG.144 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=4,BETAC=0,BETAO=0, RFEO38

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE038)

FIG.144 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=4,BETAC=0,BETAO=0, RFE038

SYMBOL   MACH   PARAMETRIC VALUES   REFERENCE INFORMATION
  O   .625   ALPHAC   .000   BETAC   .000   SREF   5500.0000   SQ.FT.
                  STAB   -1.000   ELEVON   5.000   LREF   327.7800   IN.
                  BDFLAP   .000   DX   .000   BREF   2348.0400   IN.
                  DY   .000   IORB   4.000   XMRP   1339.9000   IN. XC
                  BETAO   .000   RUDDER   .000   YMRP   .0000   IN. YC
                                                                         ZMRP   190.7500   IN. ZC
                                                                         SCALE   .0125

DRAG COEFFICIENT.CD

.04728
.04720
.04712
.04704
.04696
.04688
.04680
.04672
.04664
.04656
.04648
.04640
.04632
.04624

-8   0   8   16   24   32   40   48   56

ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG.144 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=4,BETAC=0,BETAO=0, RFE038
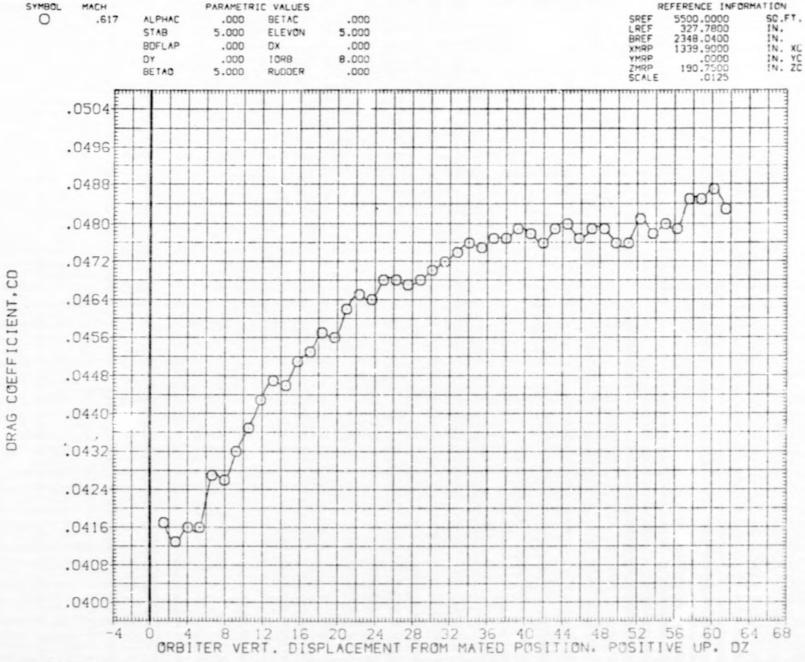
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE039)

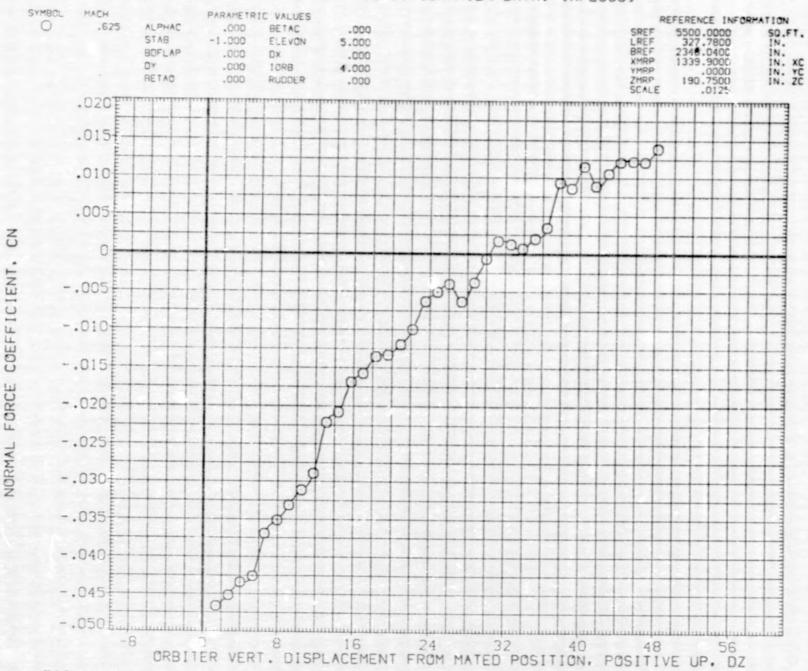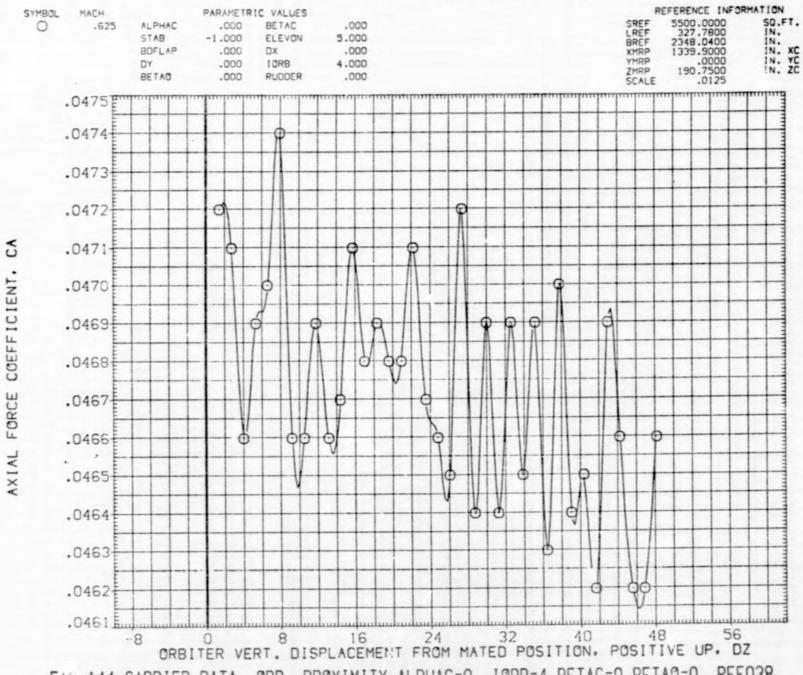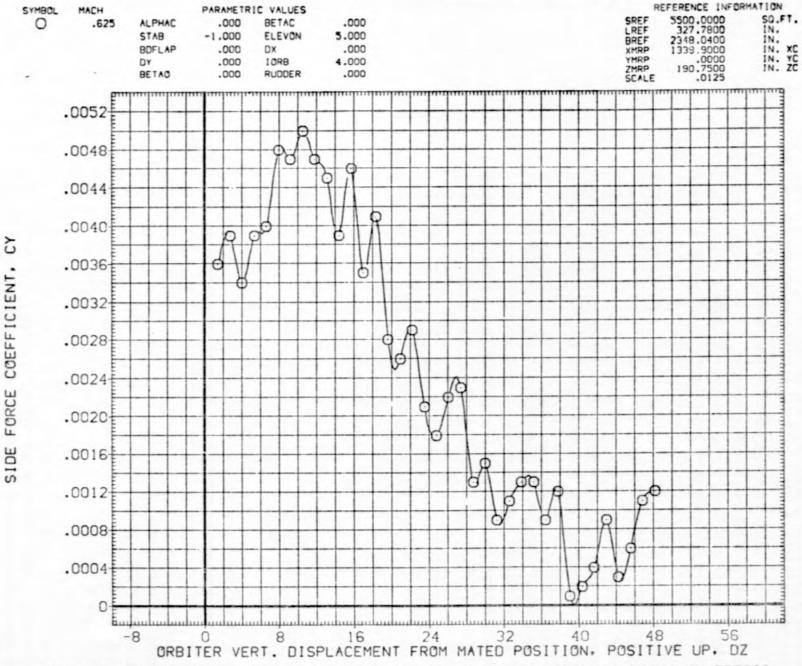FIG.145 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=6, BETAC=0, BETAO=0, RFE039

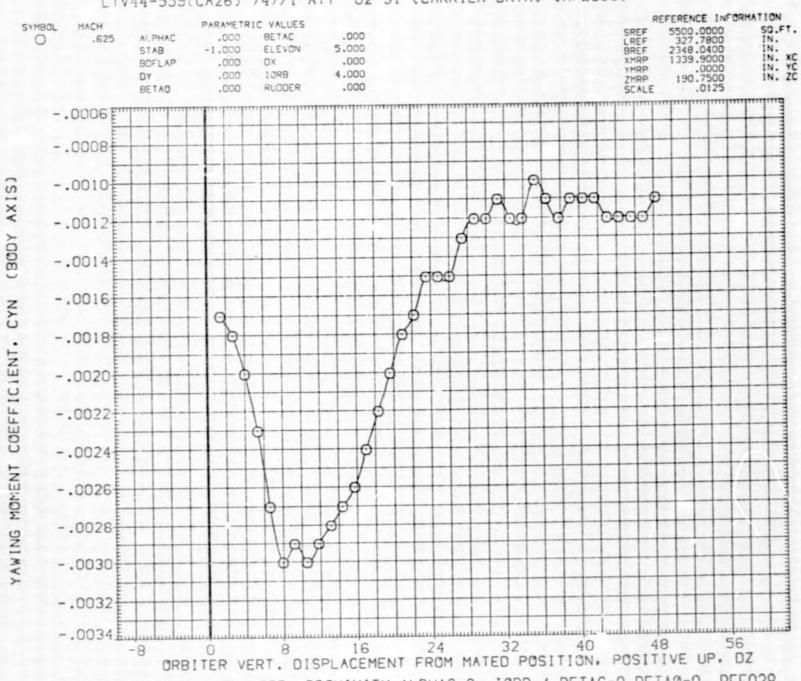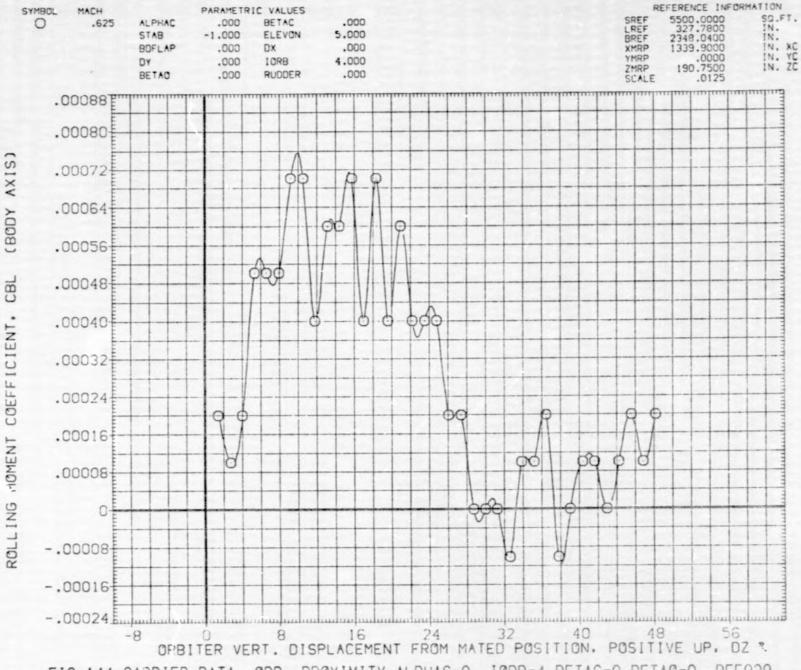LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE039)

FIG.145 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE039

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FIG.145 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE039

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE039)

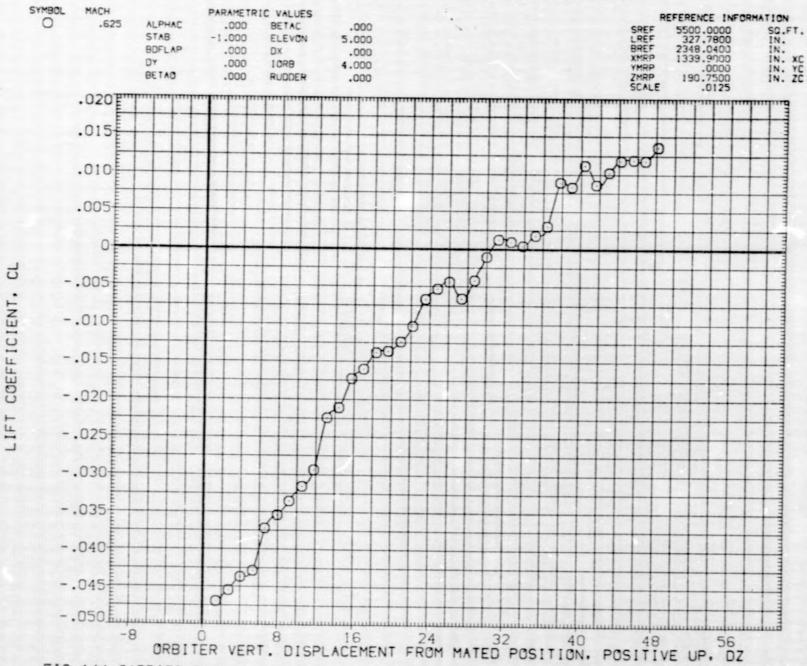FIG.145 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE039

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE039)

FIG.145 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE039
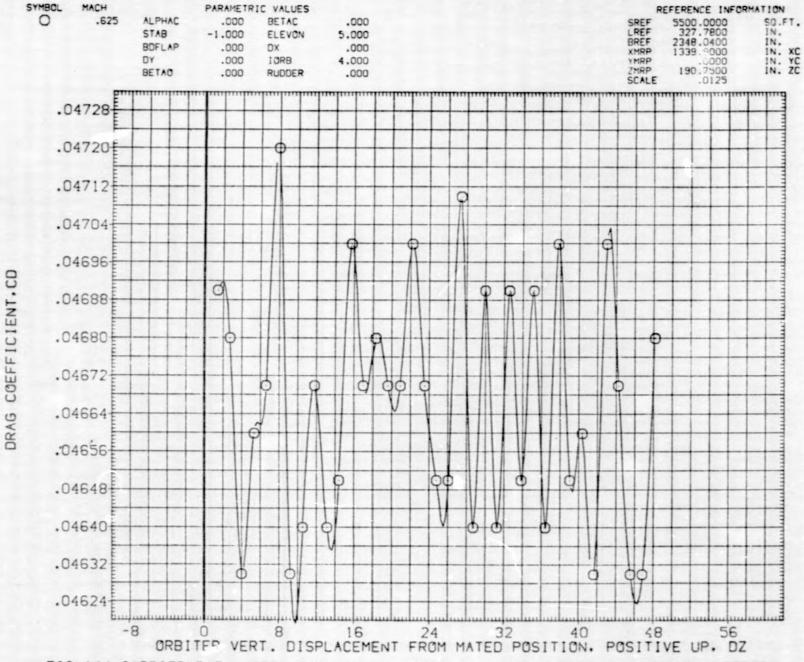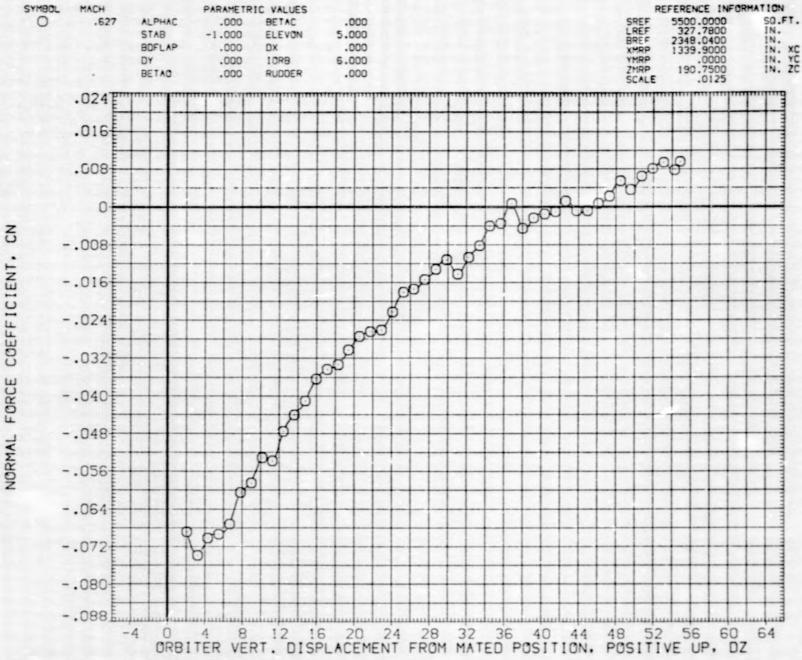
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE039)

FIG.145 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE039

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE039)

SYMBOL	MACH	PARAMETRIC VALUES			
○	.627	ALPHAC	.000	BETAC	.000
		STAB	-1.000	ELEVON	5.000
		BDFLAP	.000	DX	.000
		DY	.000	IORB	6.000
		BETAO	.000	RUDDER	.000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.145 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=6,BETAC=0,BETAO=0, RFE039

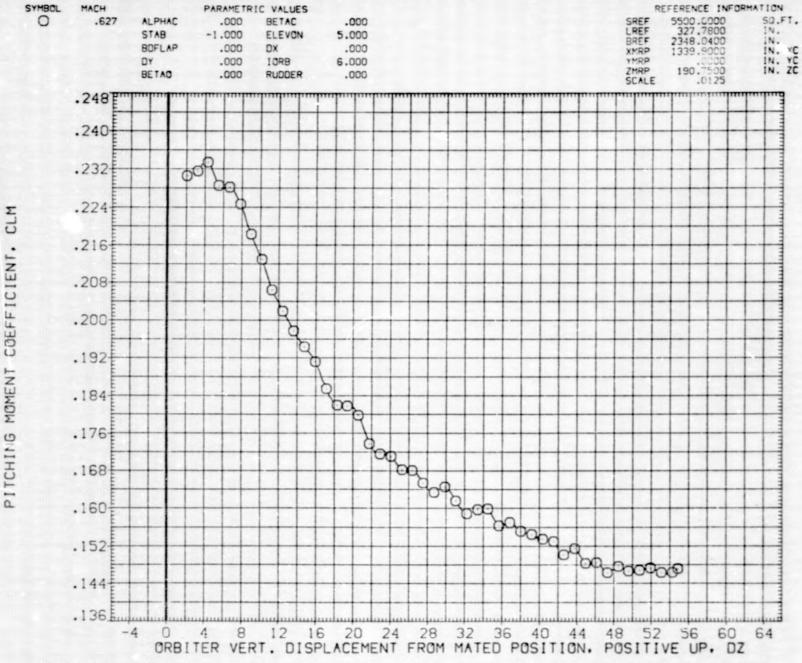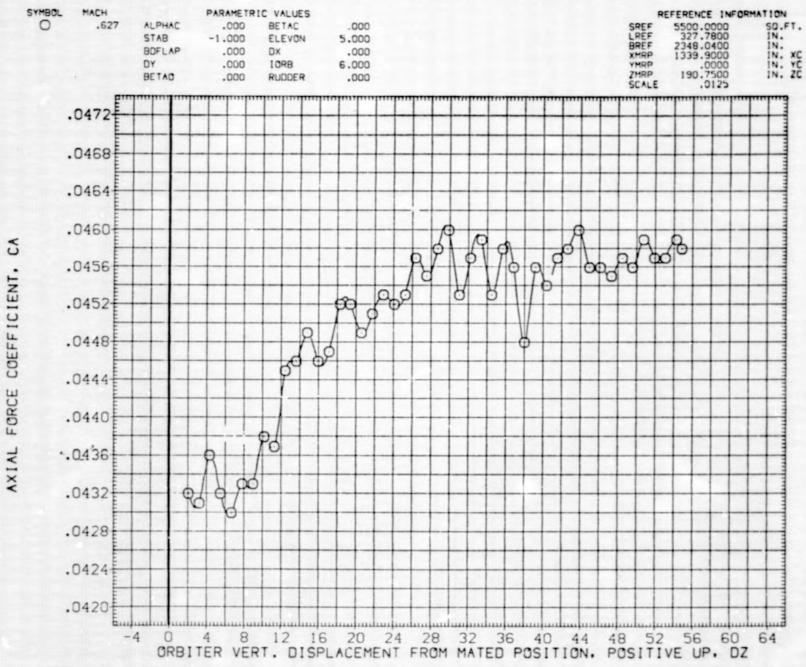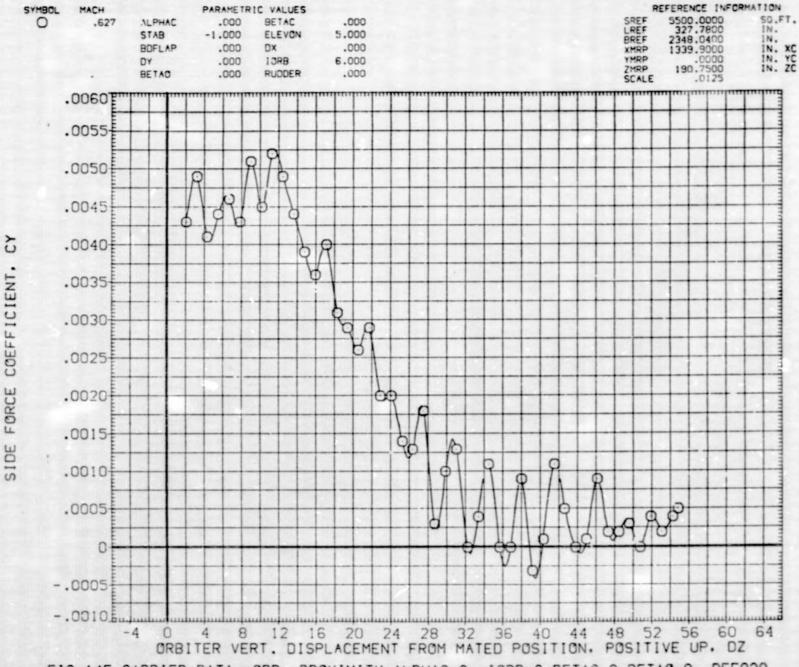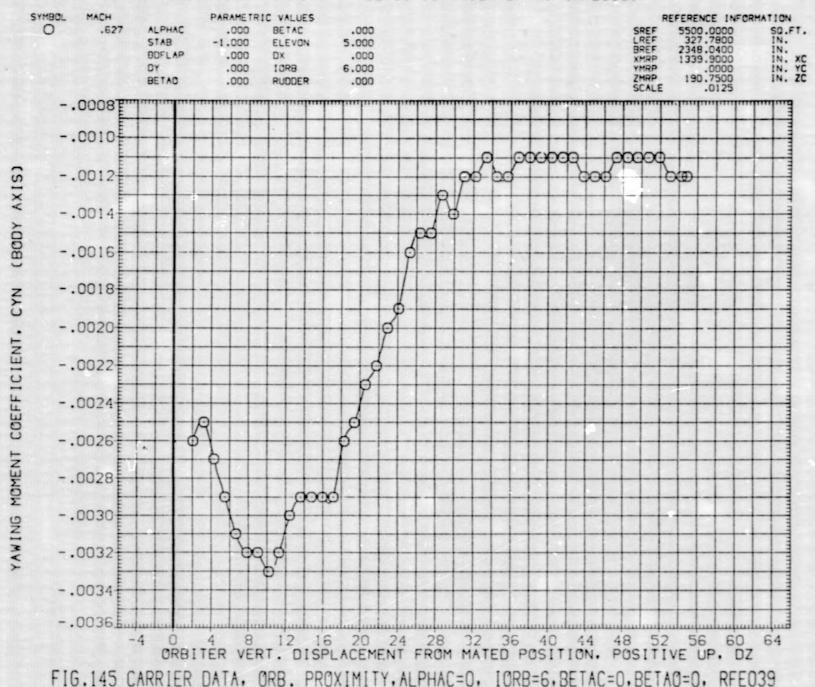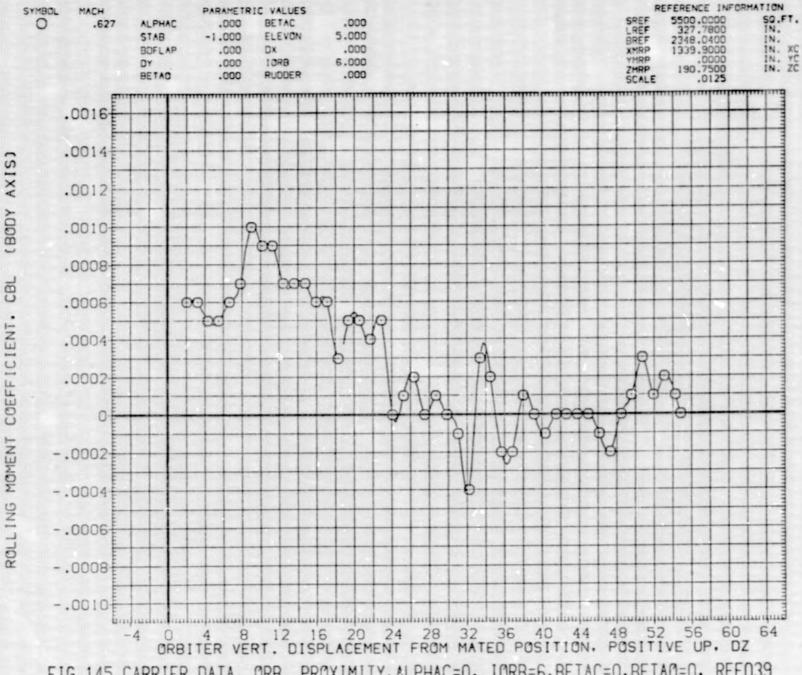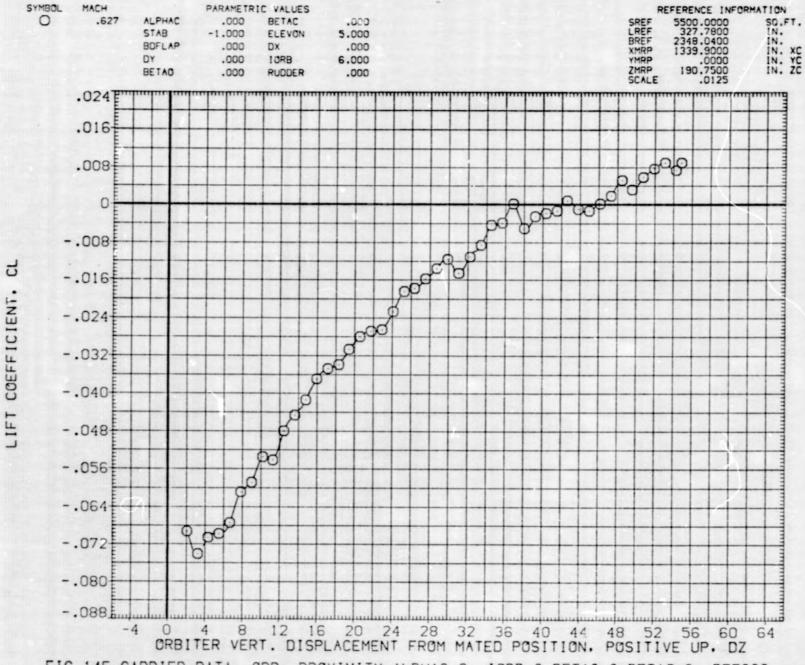# LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE039)

FIG.145 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=6, BETAC=0, BETAO=0, RFE039

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE040)

FIG.146 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=0, RFE040

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO40)

FIG.146 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=0, RFEO40

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE040)

FIG.146 CARRIER DATA. ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=0, RFE040

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE040)

FIG.146 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=0, RFE040
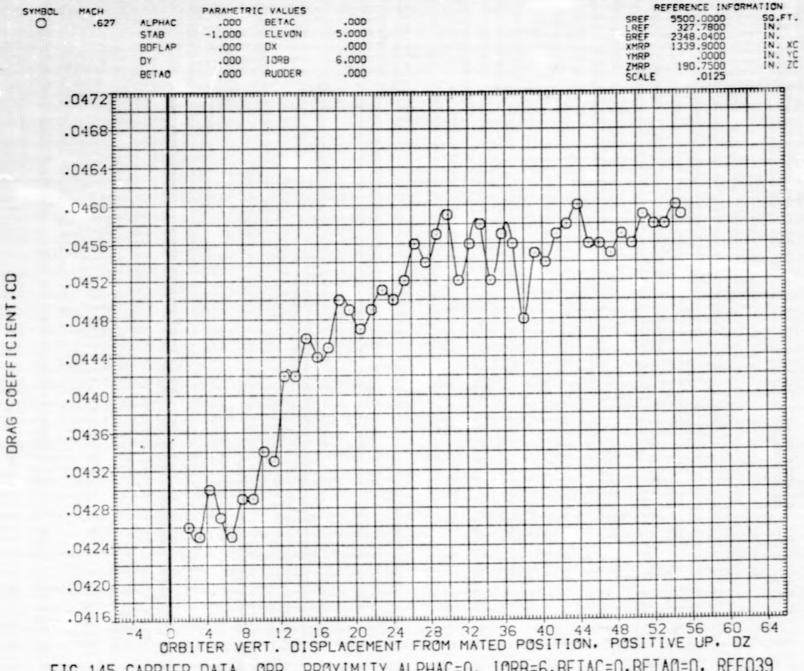
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFEO40)

FIG.146 CARRIER DATA, ORB. PROXIMITY, ALPHAC=0, IORB=8, BETAC=0, BETAO=0, RFEO40
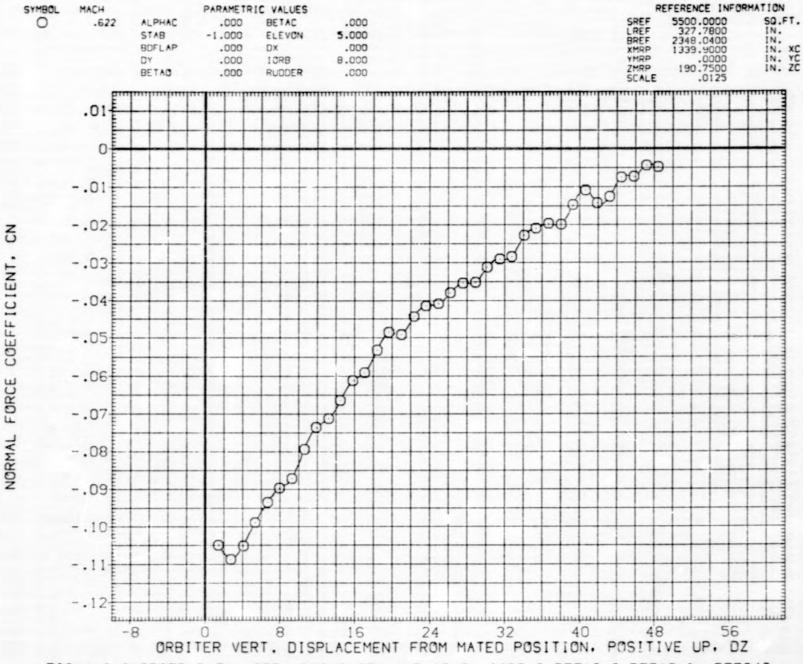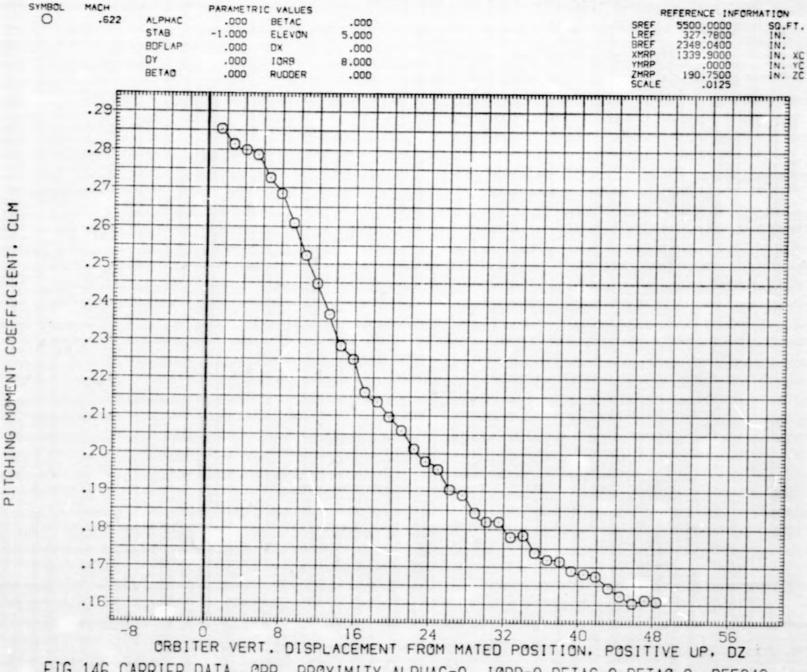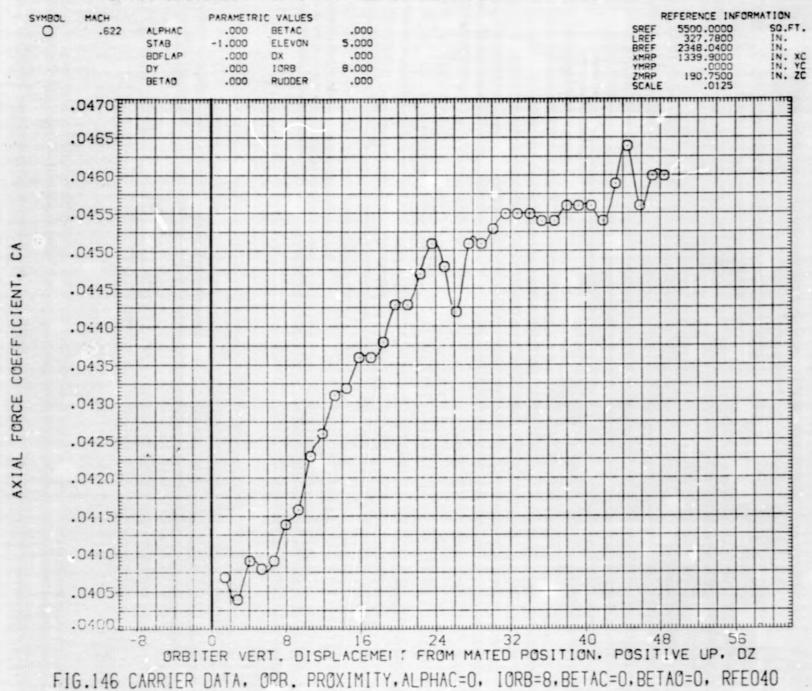
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LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO40)

FIG.146 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=0, RFEO40

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE040)

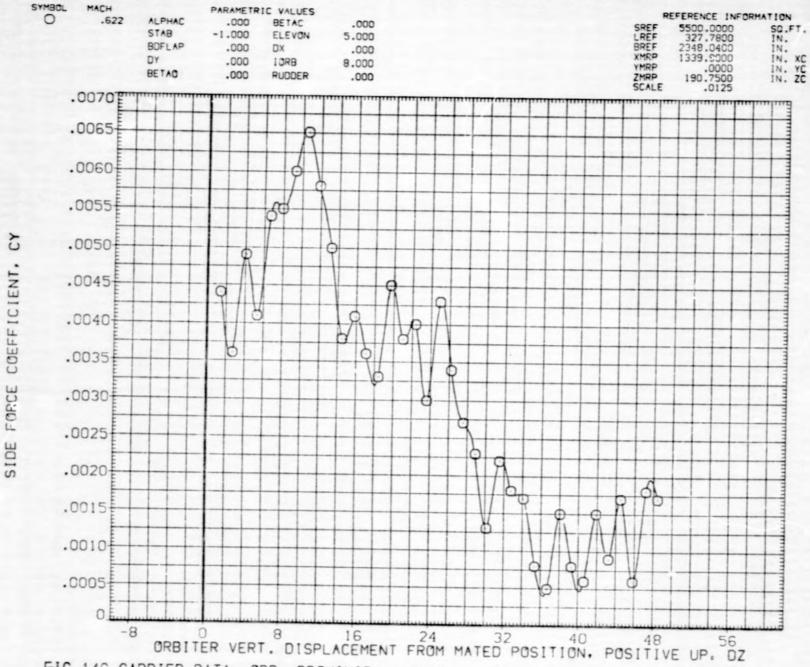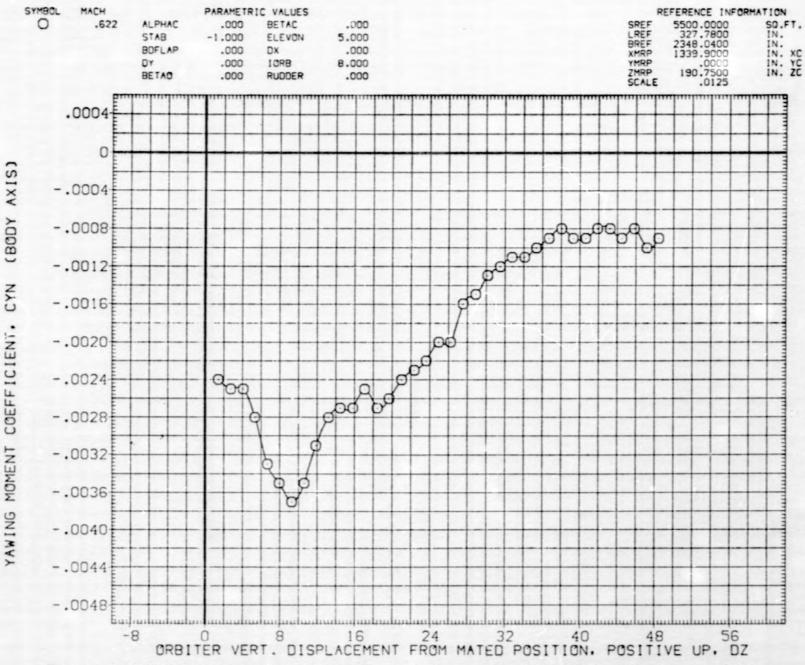| SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.622	ALPHAC	.000	BETAC	.000	SREF	5500.0000	SQ.FT.
		STAB	-1.000	ELEVON	5.000	LREF	327.7800	IN.
		BDFLAP	.000	DX	.000	BREF	2348.0400	IN.
		DY	.000	IORB	8.000	XMRP	1339.9000	IN. XC
		BETAO	.000	RUDDER	.000	YMRP	.0000	IN. YC
						ZMRP	190.7500	IN. ZC
						SCALE	.0125	

FIG.146 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=0, RFE040

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO4O)
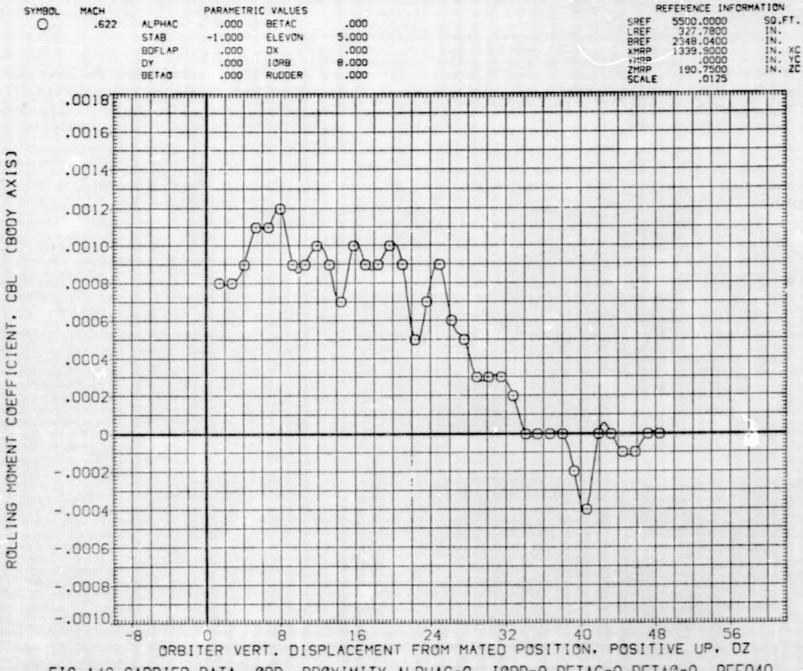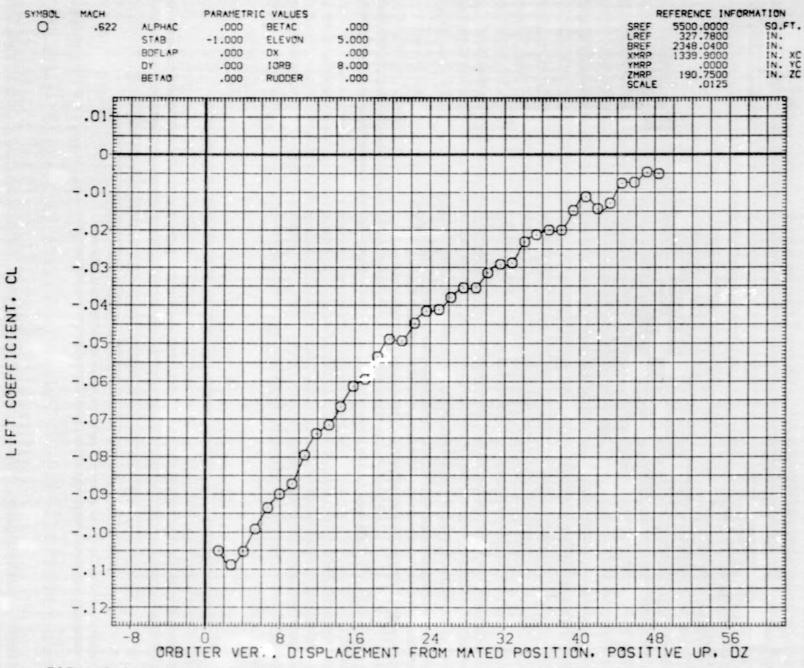
FIG.146 CARRIER DATA, ORB. PROXIMITY,ALPHAC=0, IORB=8,BETAC=0,BETAO=0, RFEO4O

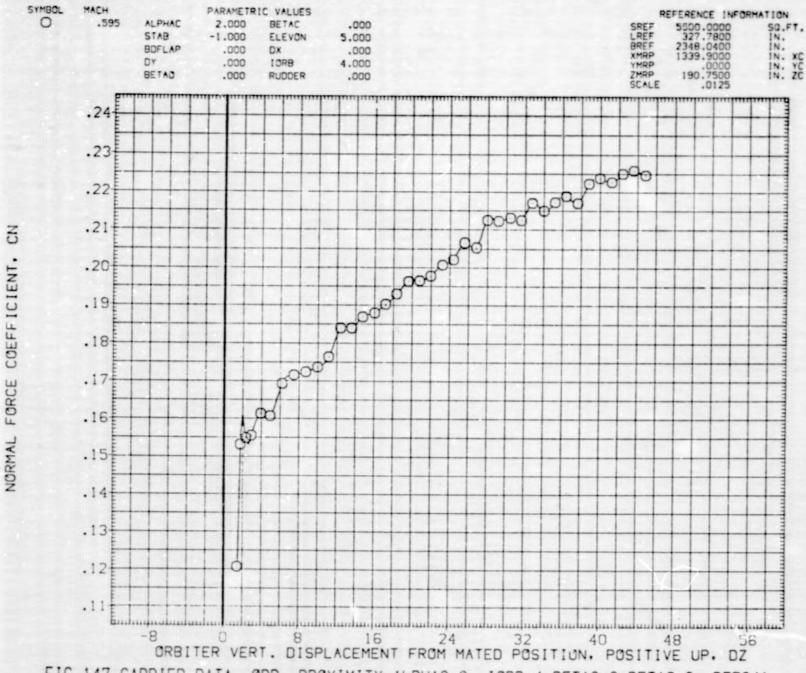PAGE 1144

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO41)

SYMBOL	MACH		PARAMETRIC VALUES			
O	.595	ALPHAC	2.000	BETAC	.000	
		STAB	-1.000	ELEVON	5.000	
		BDFLAP	.000	DX	.000	
		DY	.000	IORB	4.000	
		BETAO	.000	RUDDER	.000	

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

NORMAL FORCE COEFFICIENT, CN

ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG.147 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFEO41
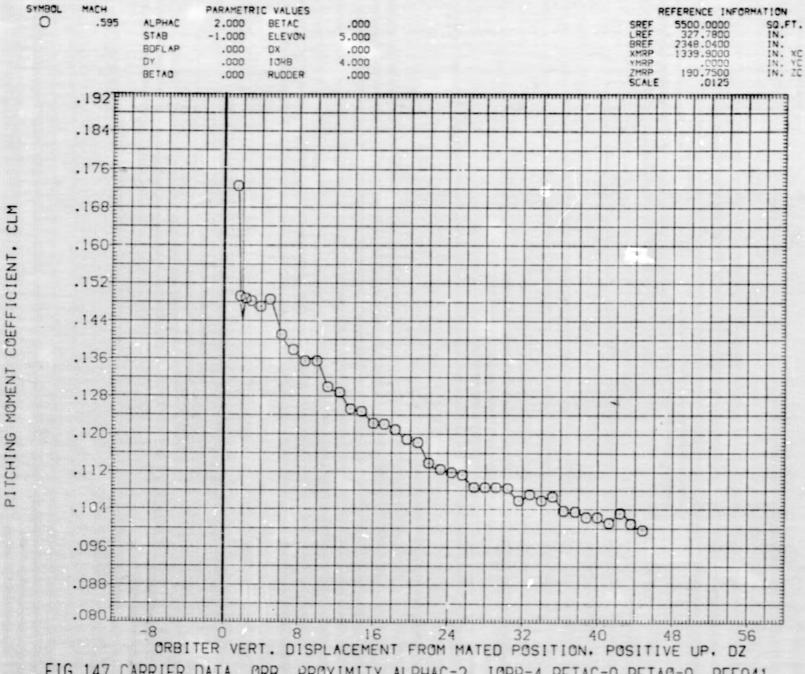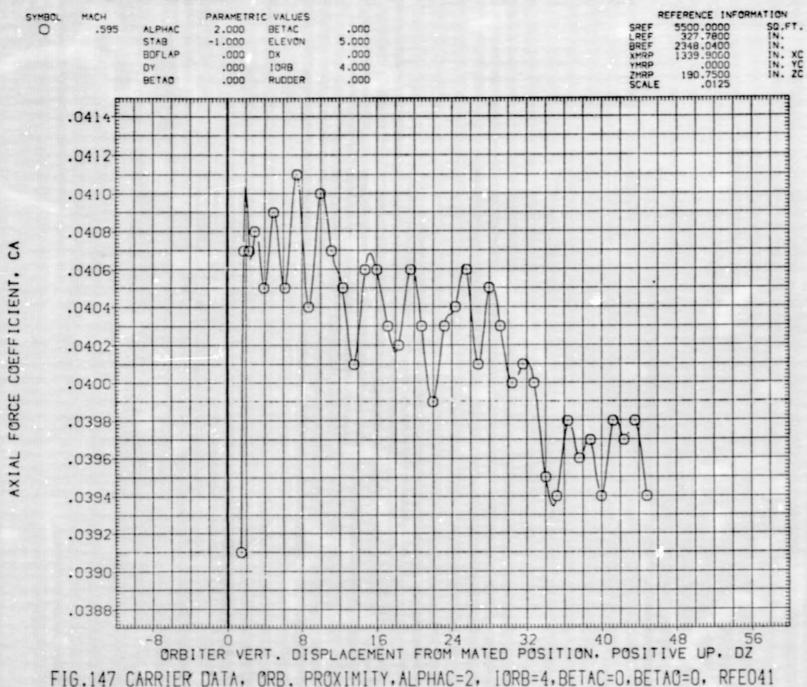
LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO41)

FIG.147 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFEO41
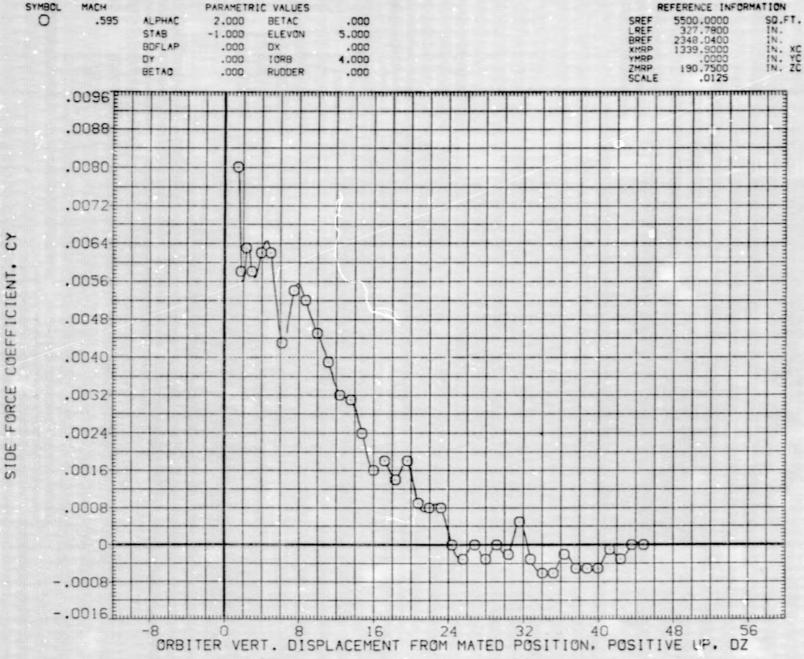
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE041)

FIG.147 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFE041

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE041)

FIG.147 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=4, BETAC=0, BETAO=0, RFE041
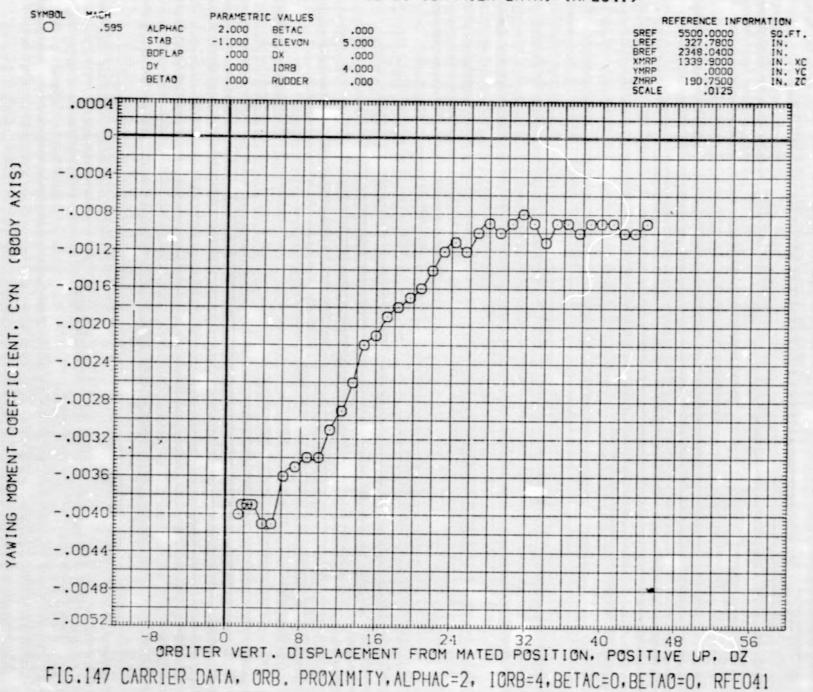
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FIG.147 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=4, BETAC=0, BETAO=0, RFE041
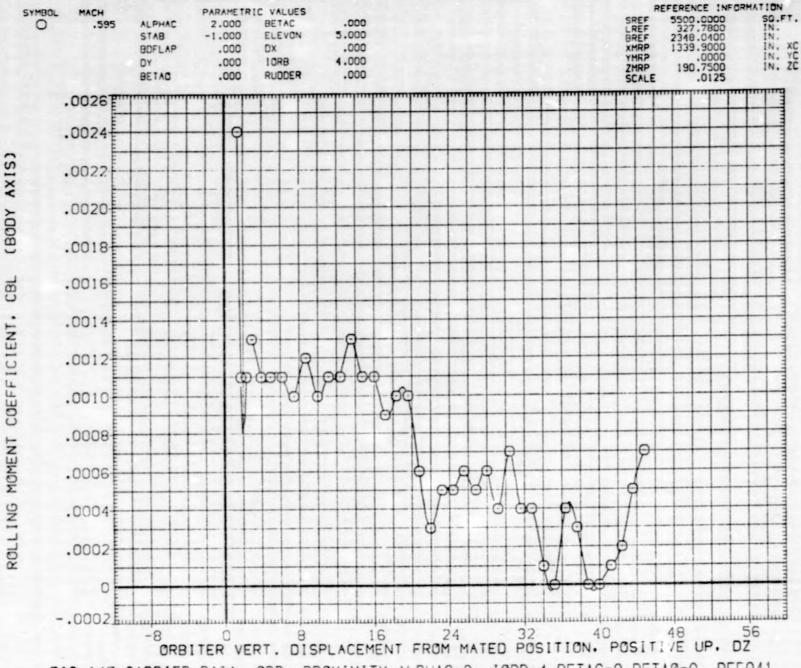
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE041)

FIG.147 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFE041

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE041)

FIG.147 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFE041

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE041)

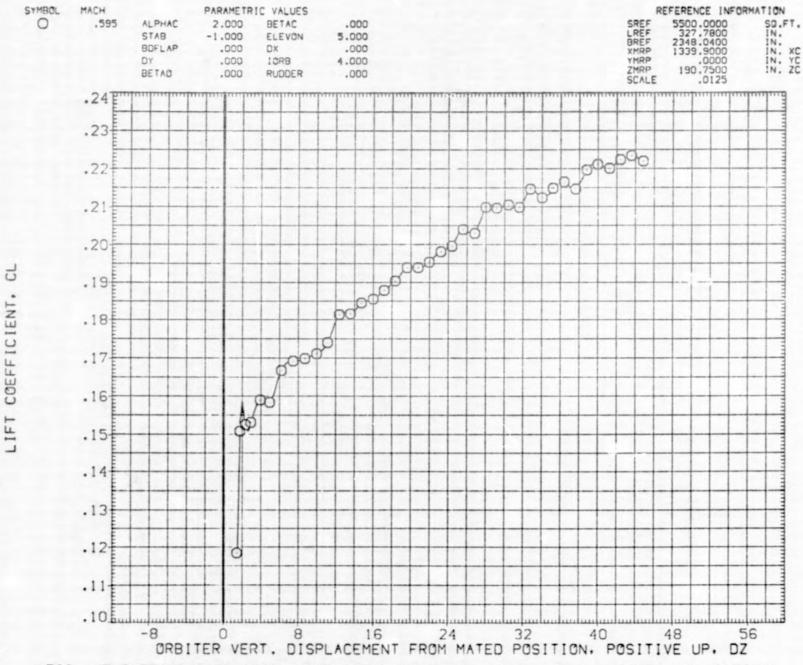FIG.147 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFE041

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE042)

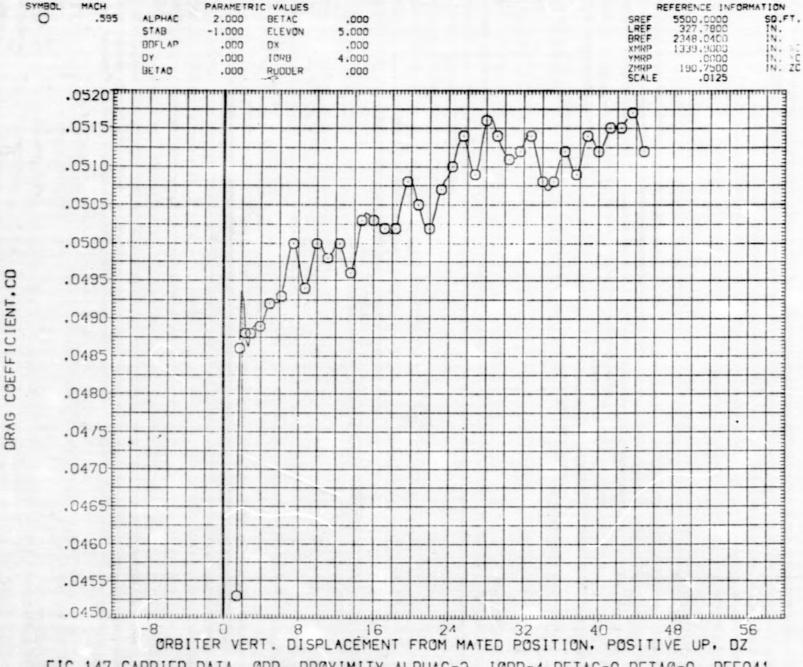FIG.148 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, RFE042

PITCHING MOMENT COEFFICIENT, CLM

SYMBOL | MACH
O | .592

PARAMETRIC VALUES

ALPHAC	2.000	BETAC	.000
STAB	-1.000	ELEVON	5.000
BDFLAP	.000	DX	.000
DY	.000	IORB	6.000
BETAO	.000	RUDDER	.000

REFERENCE INFORMATION

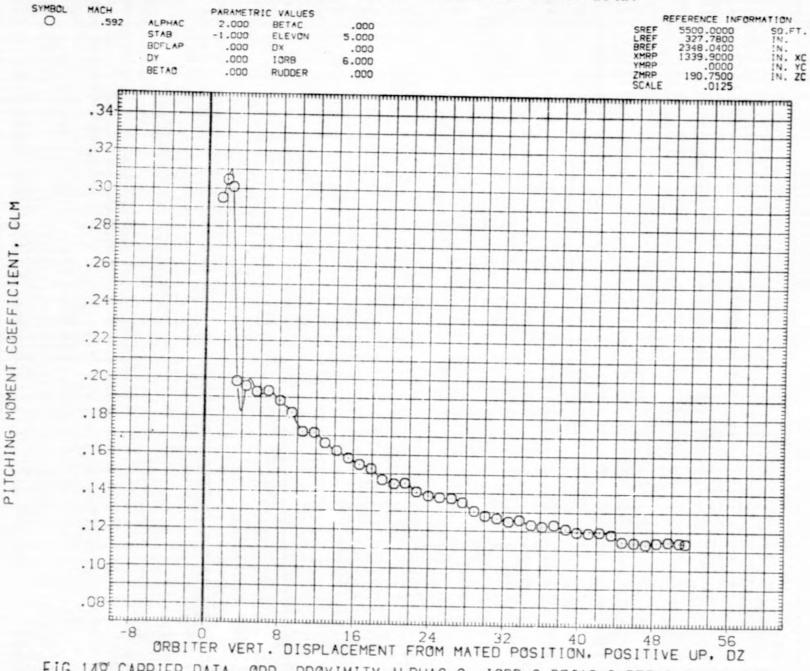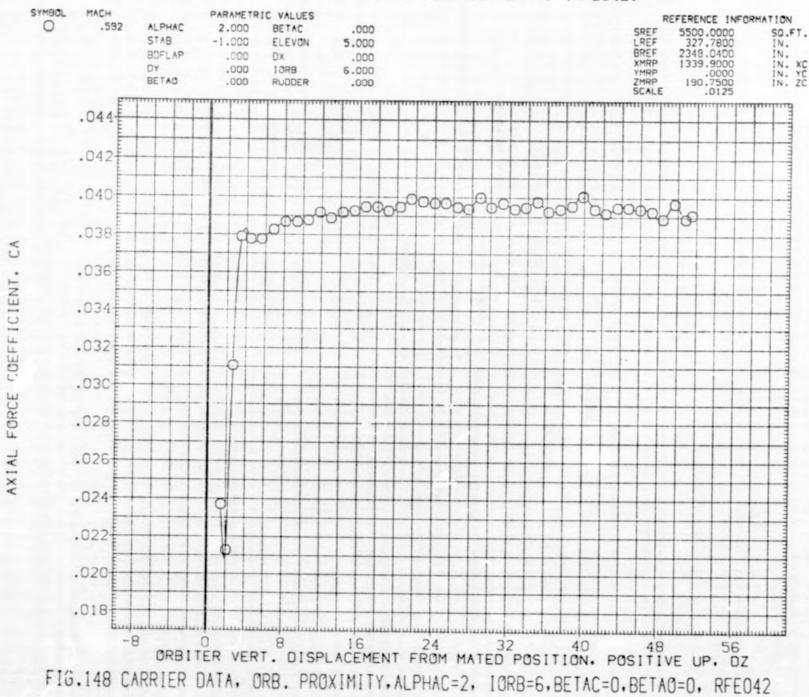|		
SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

ORBITER VERT. DISPLACEMENT FROM MATED POSITION, POSITIVE UP, DZ

FIG.148 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, RFE042

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE042)

FIG.148 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETA0=0, RFE042

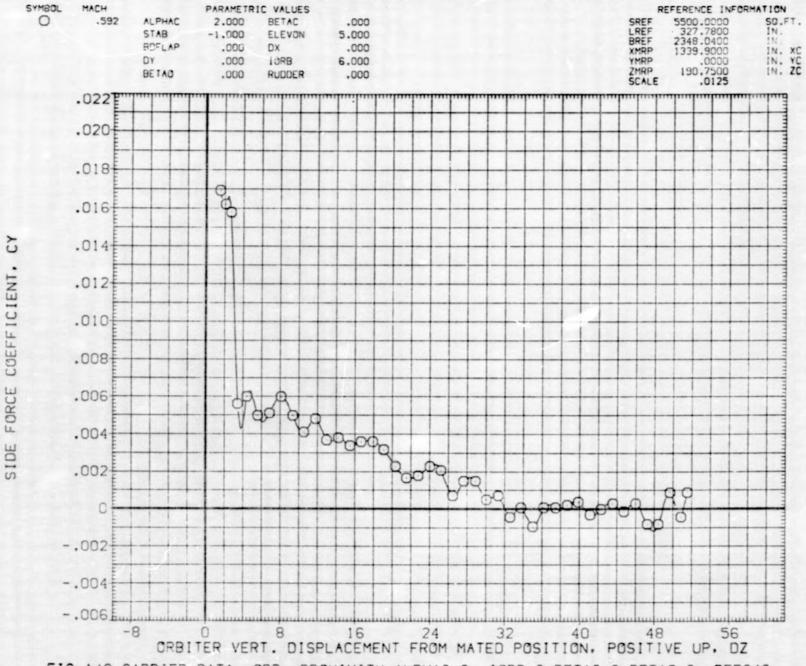LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO42)

FIG.148 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, RFEO42
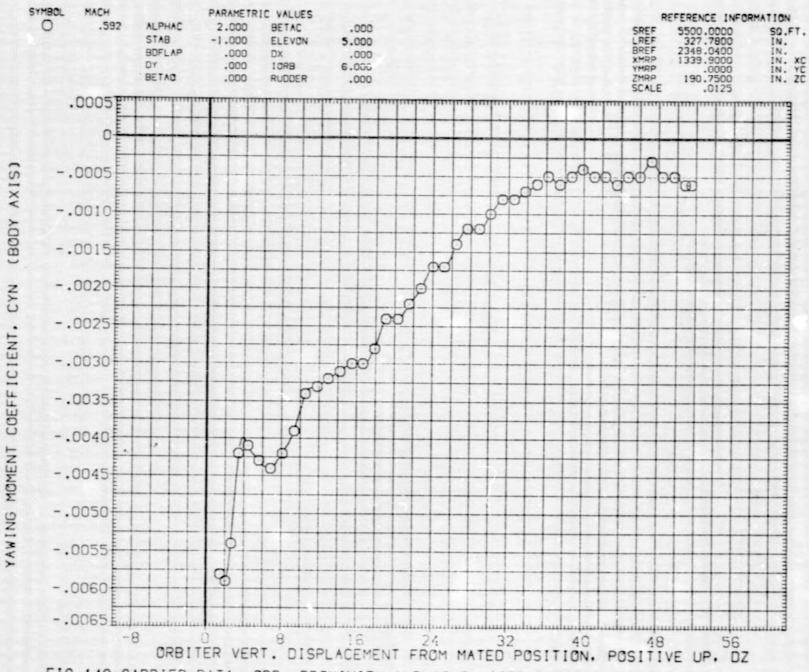
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LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE042)

FIG.148 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=0, RFE042

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE042)
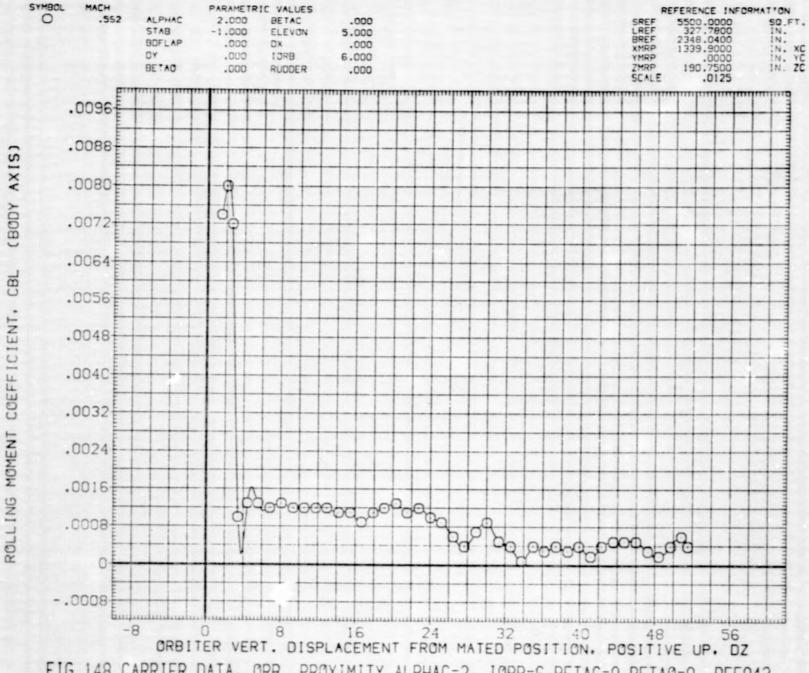
FIG.148 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=0, RFE042

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE042)

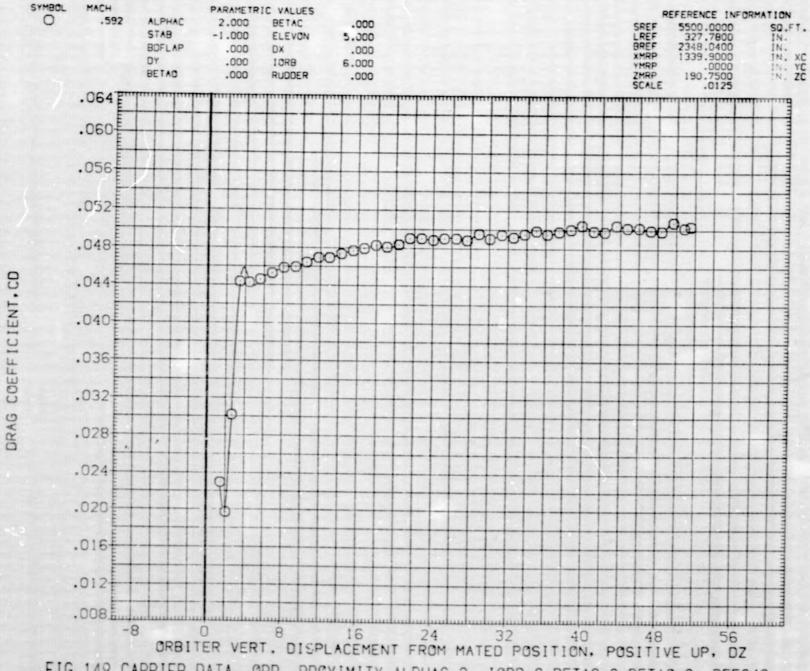| SYMBOL	MACH	PARAMETRIC VALUES			
◯	.592	ALPHAC	2.000	BETAC	.000
		STAB	-1.000	ELEVON	5.000
		BDFLAP	.000	DX	.000
		DY	.000	IORB	6.000
		BETAO	.000	RUDDER	.000

REFERENCE INFORMATION

SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

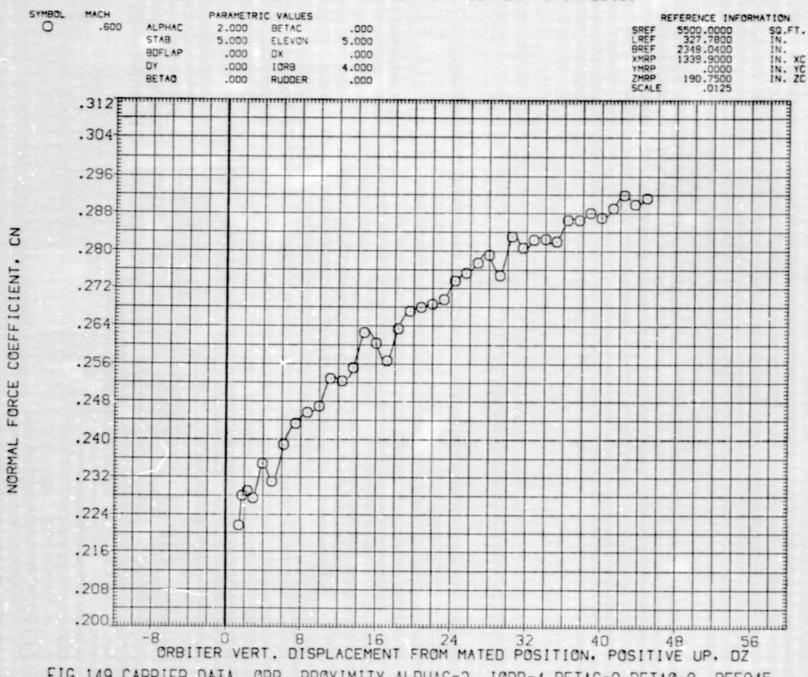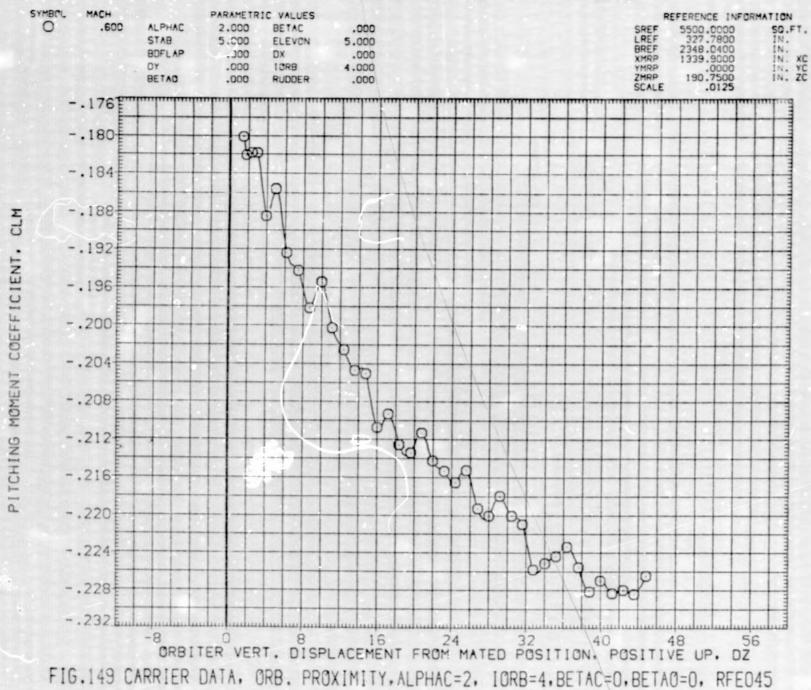FIG.148 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=0, RFE042

FIG.148 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=0, RFE042

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE045)

FIG.149 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFE045

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE045)

FIG.149 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFE045

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LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE045)

FIG.149 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETA0=0, RFE045

FIG.149 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFE045
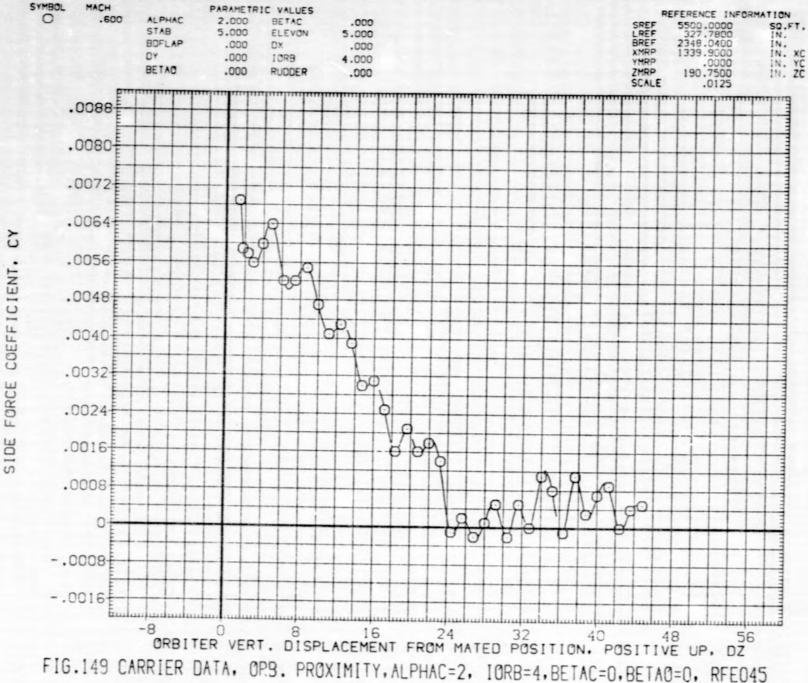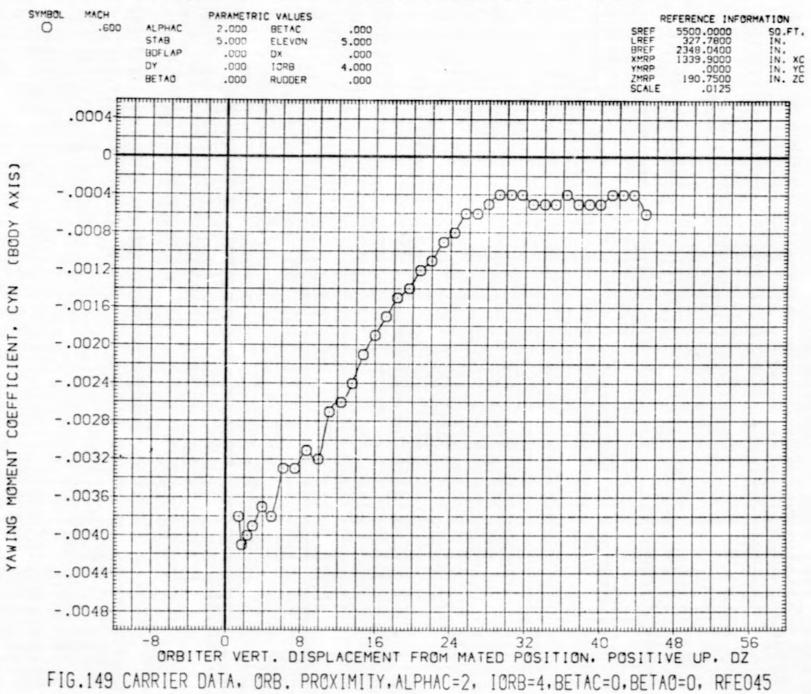
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE045)

FIG.149 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=4, BETAC=0, BETAO=0, RFE045

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE045)

FIG.149 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFE045

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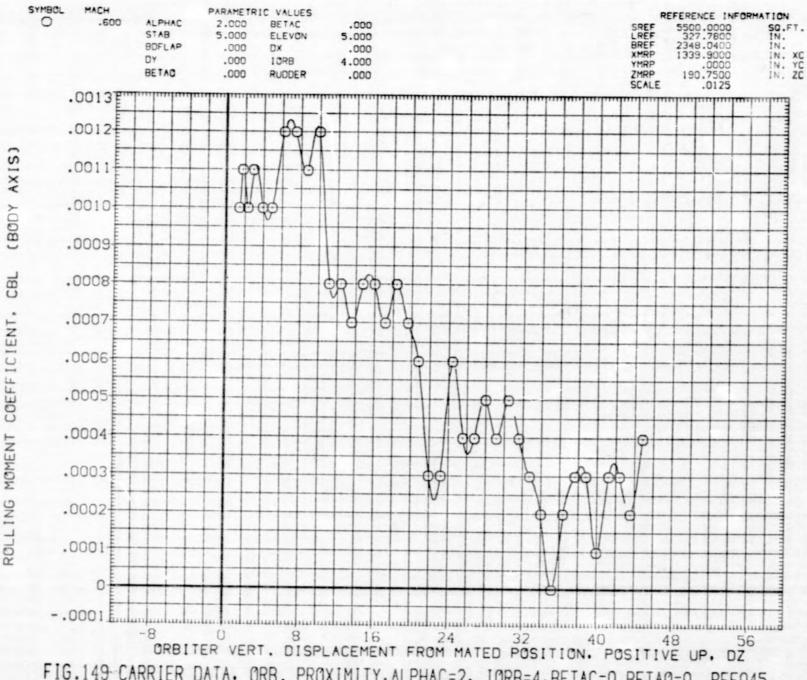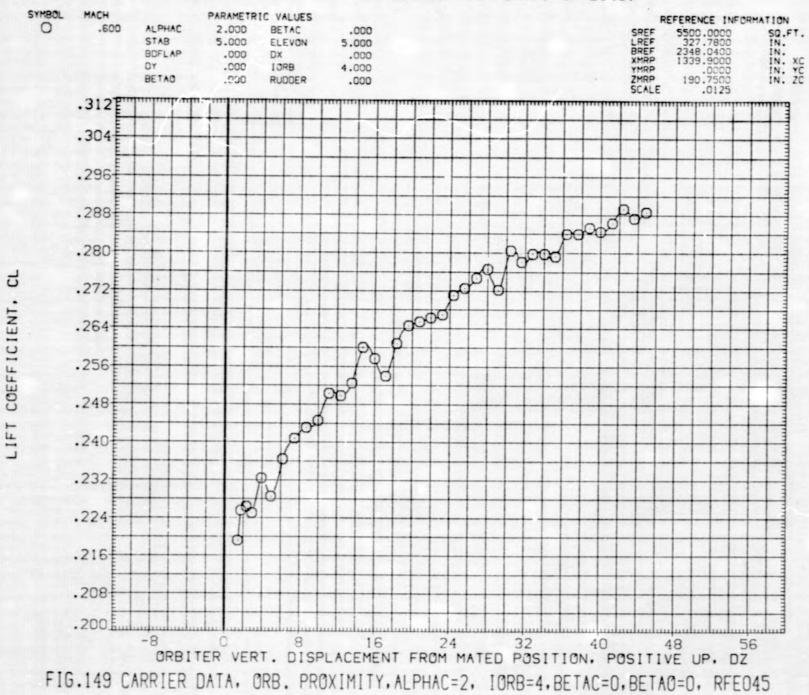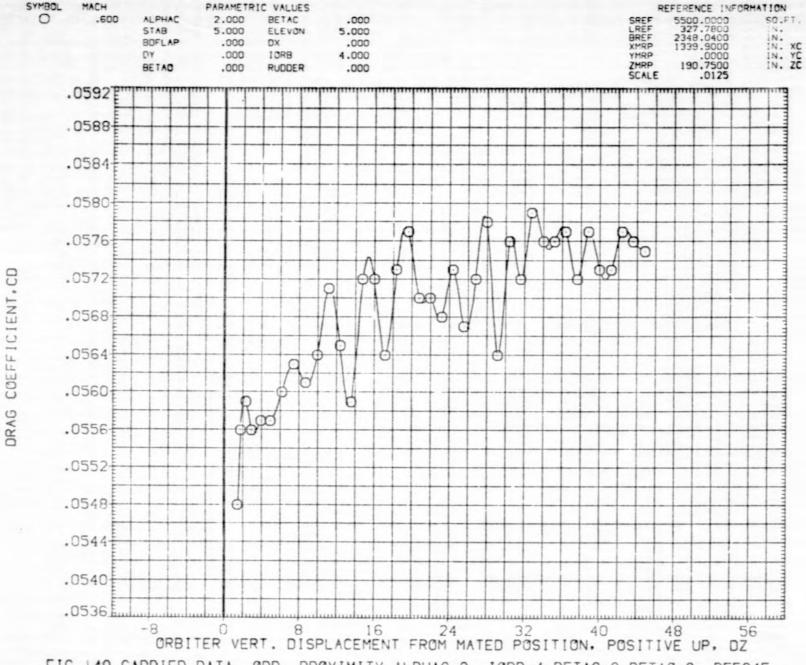LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE045)

FIG.149 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=4, BETAC=0, BETAO=0, RFE045

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE045)

FIG.149 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFE045

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LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO46)

SYMBOL	MACH	PARAMETRIC VALUES			
○	.329	ALPHAC	2.000	BETAC	.000
□	.501	STAB	5.000	ELEVON	5.000
◇	.604	BDFLAP	.000	DX	.000
△	.698	DY	.000	IORB	6.000
		BETAO	.000	RUDDER	.000

REFERENCE INFORMATION

SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

FIG.150 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=0, RFEO46

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FIG.150 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=0, RFE046

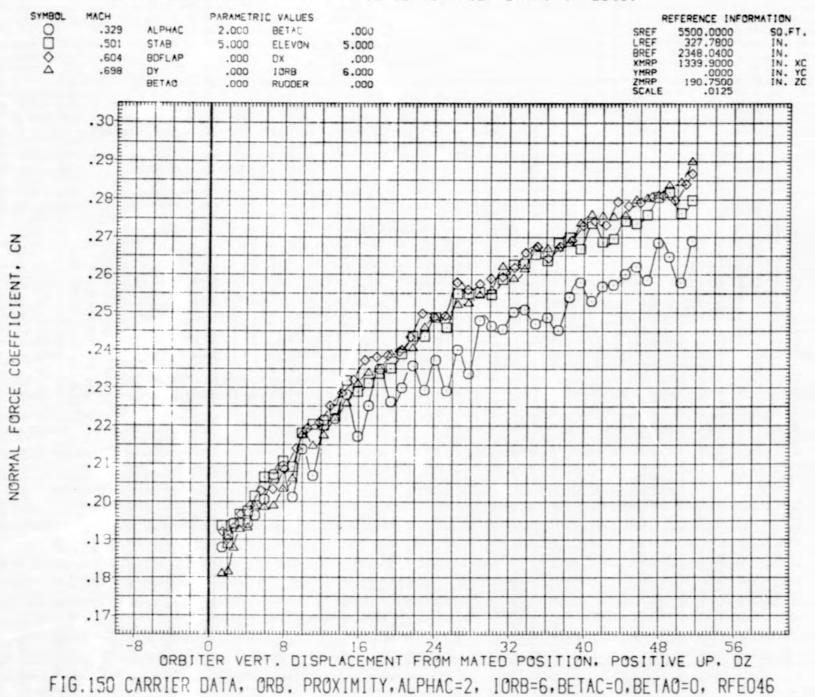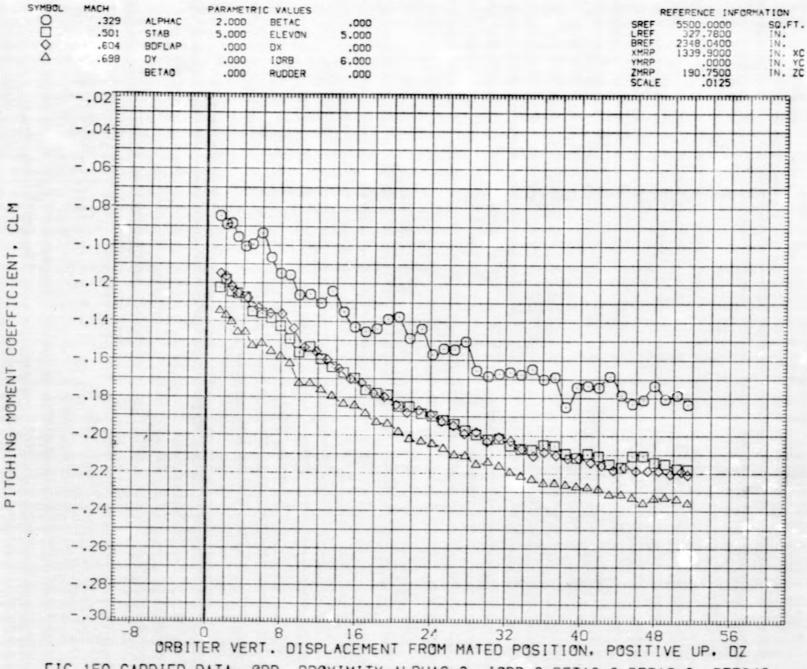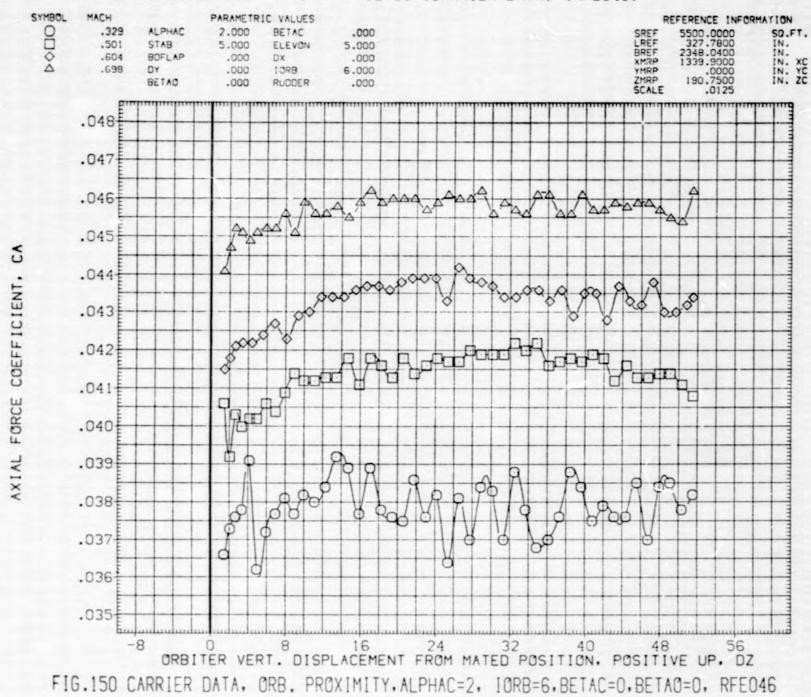LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE046)

SYMBOL	MACH		PARAMETRIC VALUES			
○	.329	ALPHAC	2.000	BETAC	.000	
□	.501	STAB	5.000	ELEVON	5.000	
◇	.604	BDFLAP	.000	DX	.000	
△	.698	DY	.000	IORB	6.000	
		BETAO	.000	RUDDER	.000	

REFERENCE INFORMATION

SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

FIG.150 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=0, RFE046

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE046)
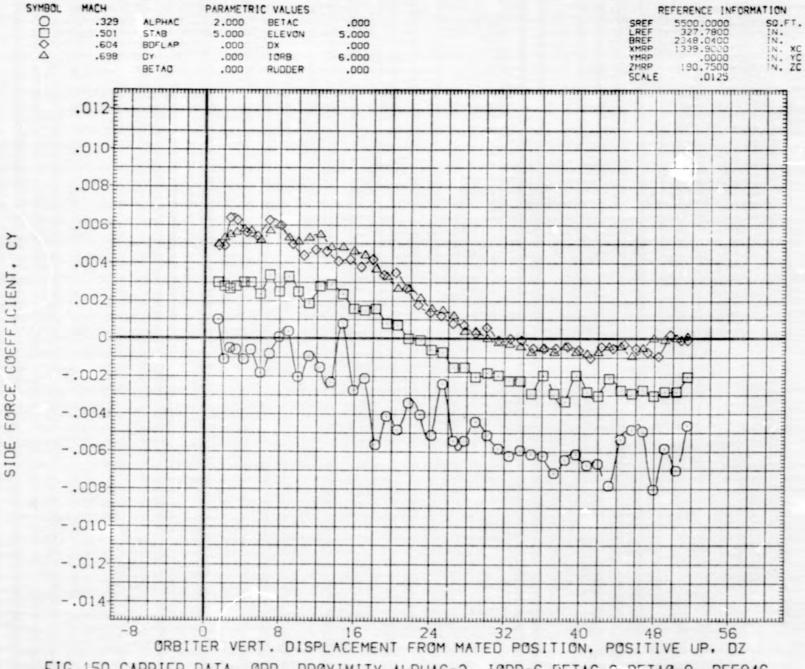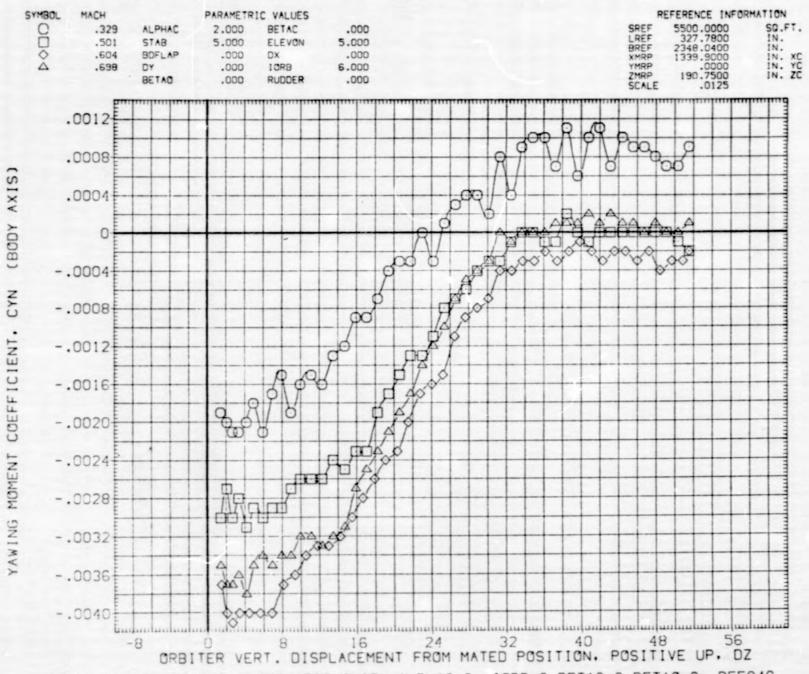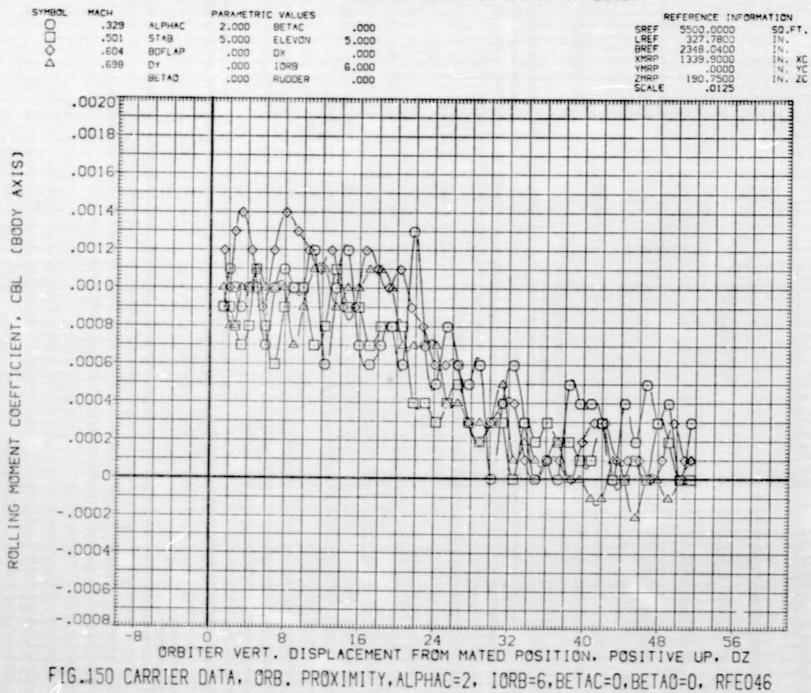
FIG.150 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, RFE046

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE046)

FIG.150 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=0, RFE046
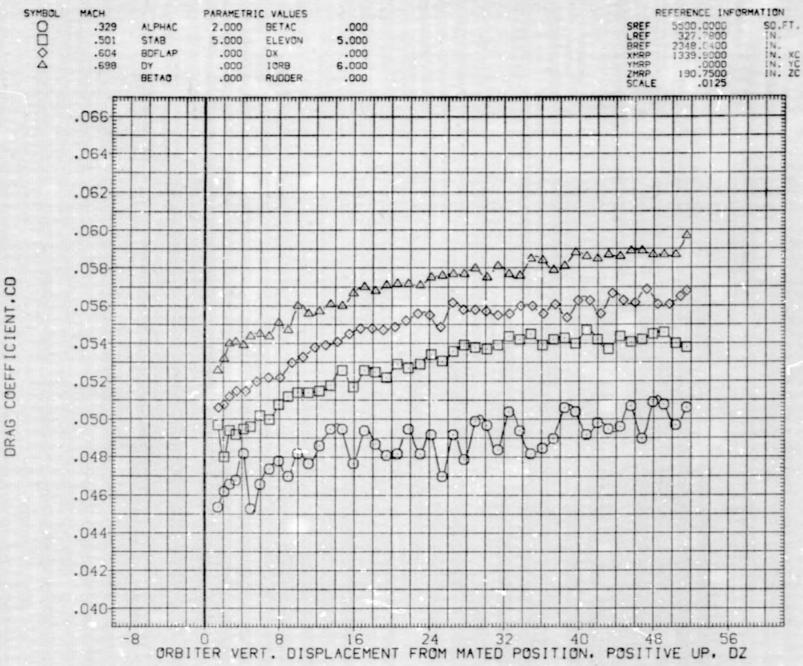
LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE046)

FIG.150 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=0, RFE046

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE046)

FIG.150 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=0, RFE046

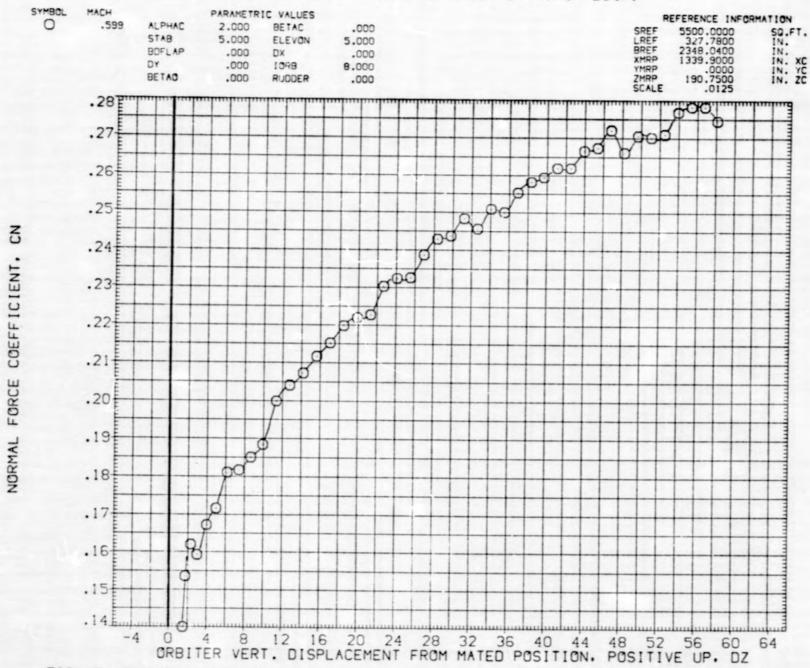LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO46)

FIG.150 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, RFEO46

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE047)

SYMBOL   MACH   PARAMETRIC VALUES   REFERENCE INFORMATION
  O   .599   ALPHAC   2.000   BETAC   .000   SREF   5500.0000   SQ.FT.
                  STAB   5.000   ELEVON   5.000   LREF   327.7800   IN.
                  BDFLAP   .000   DX   .000   BREF   2348.0400   IN.
                  DY   .000   IORB   8.000   XMRP   1339.9000   IN. XC
                  BETAO   .000   RUDDER   .000   YMRP   .0000   IN. YC
                                                            ZMRP   190.7500   IN. ZC
                                                            SCALE   .0125

FIG.151 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=8,BETAC=0,BETAO=0, RFE047

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FIG.151 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=8,BETAC=0,BETAO=0, RFE047

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE047)

FIG.151 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=8, BETAC=0, BETAO=0, RFE047

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE047)
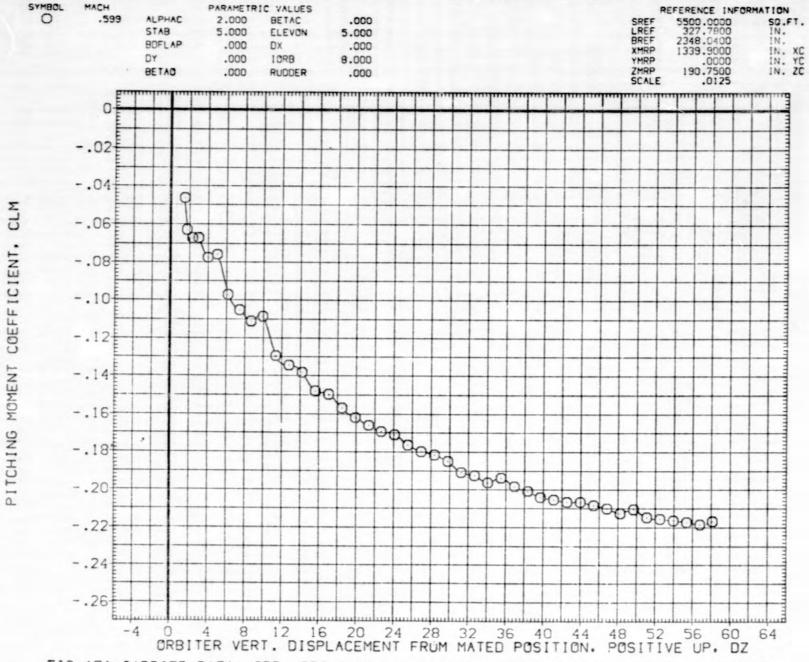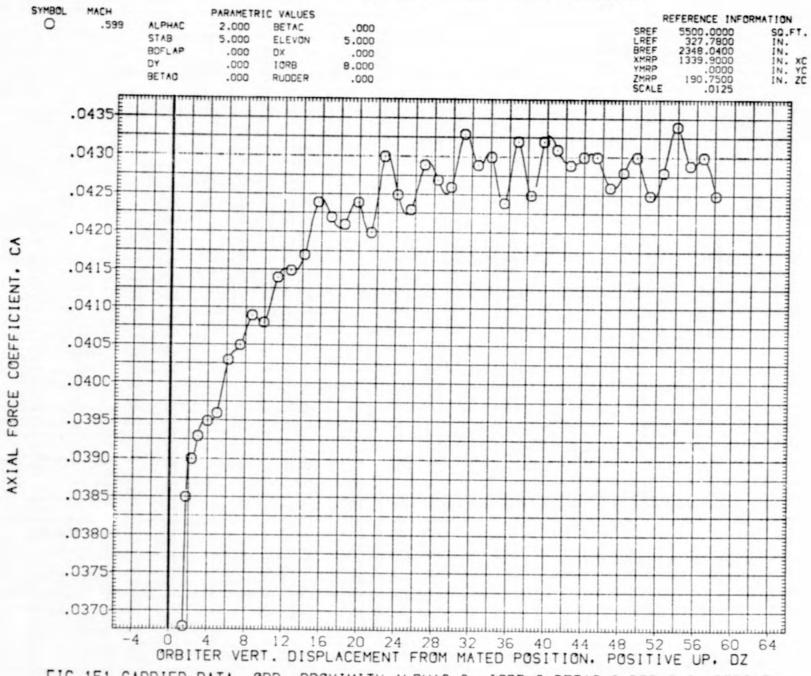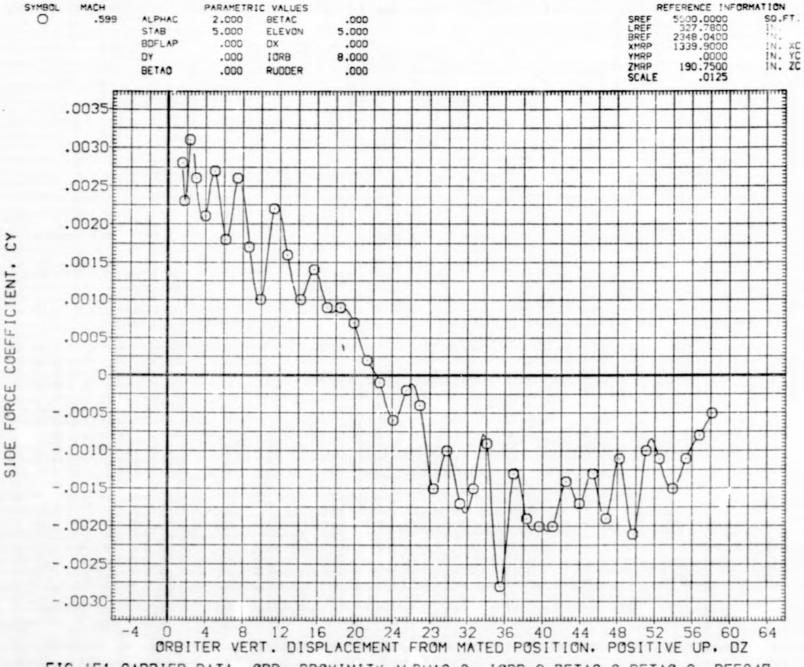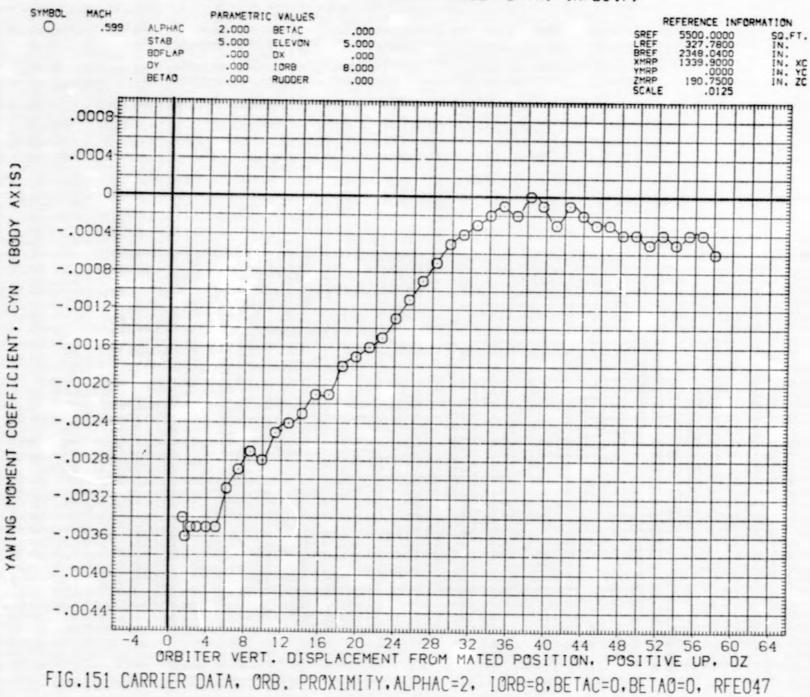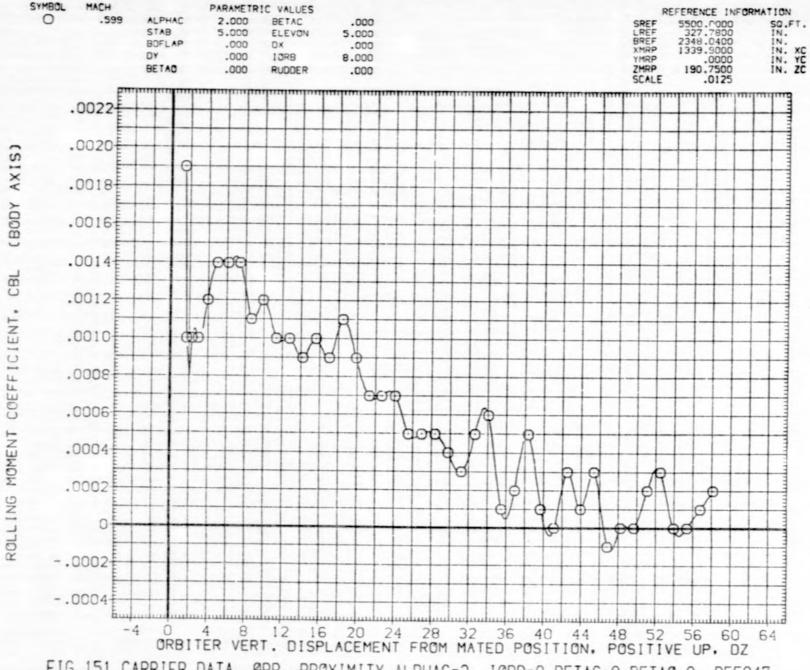
FIG.151 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=8, BETAC=0, BETAO=0, RFE047

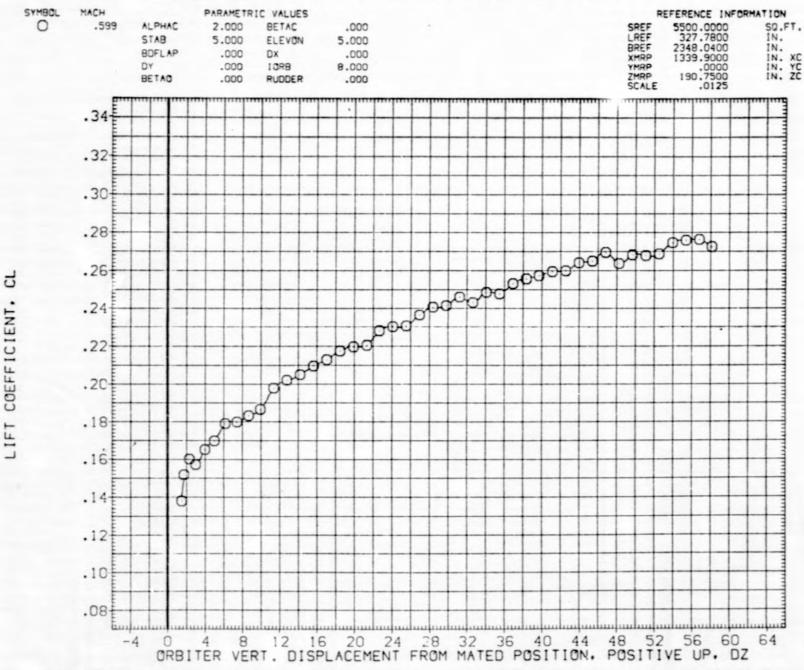LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE047)

FIG.151 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=8,BETAC=0,BETAO=0, RFE047

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE047)

FIG.151 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=8,BETAC=0,BETAO=0, RFE047
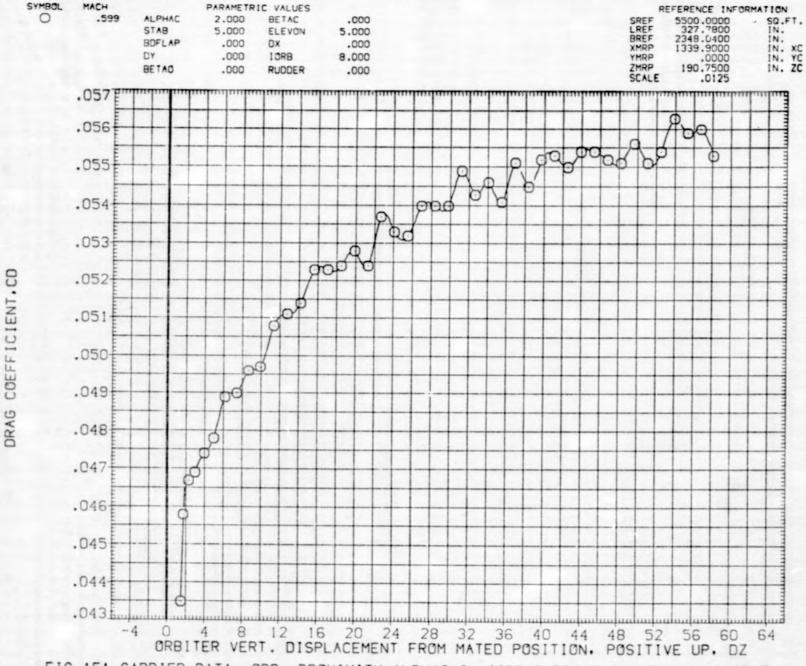
LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE047)

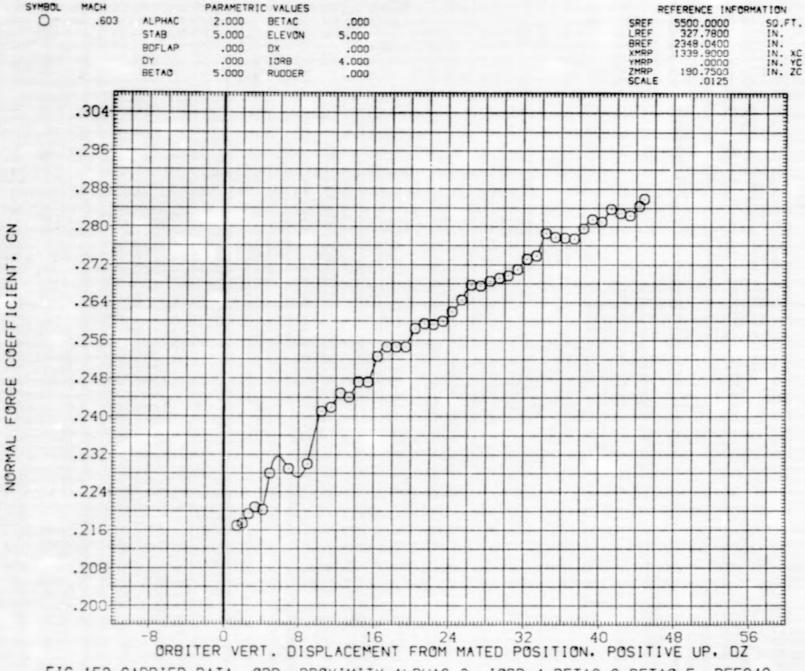| SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.599	ALPHAC	2.000	BETAC	.000		SREF	5500.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000		LREF	327.7800	IN.
		BDFLAP	.000	DX	.000		BREF	2348.0400	IN.
		DY	.000	IORB	8.000		XMRP	1339.9000	IN. XC
		BETAO	.000	RUDDER	.000		YMRP	.0000	IN. YC
							ZMRP	190.7500	IN. ZC
							SCALE	.0125	

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FIG.151 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=8,BETAC=0,BETAO=0, RFE047

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE047)

FIG.151 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=8,BETAC=0,BETAO=0, RFE047
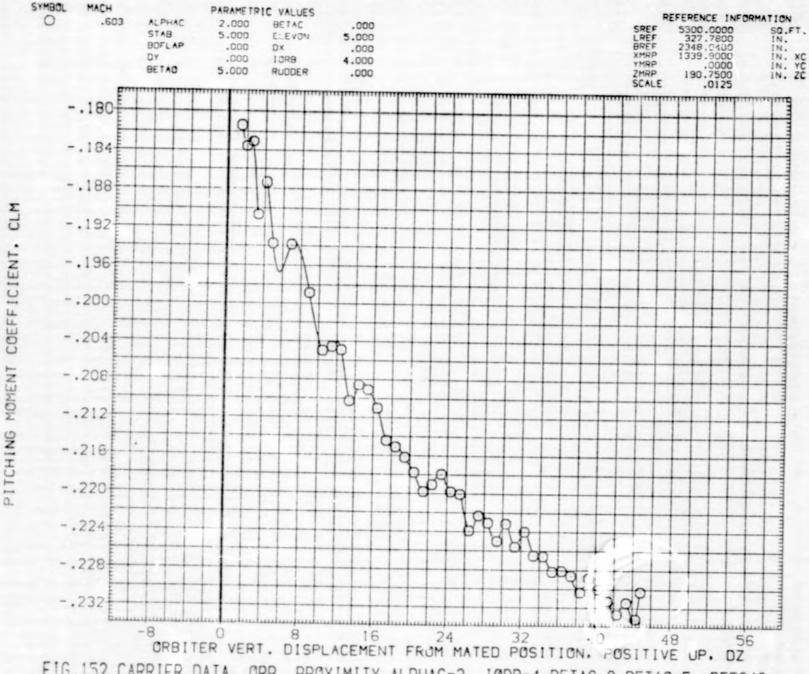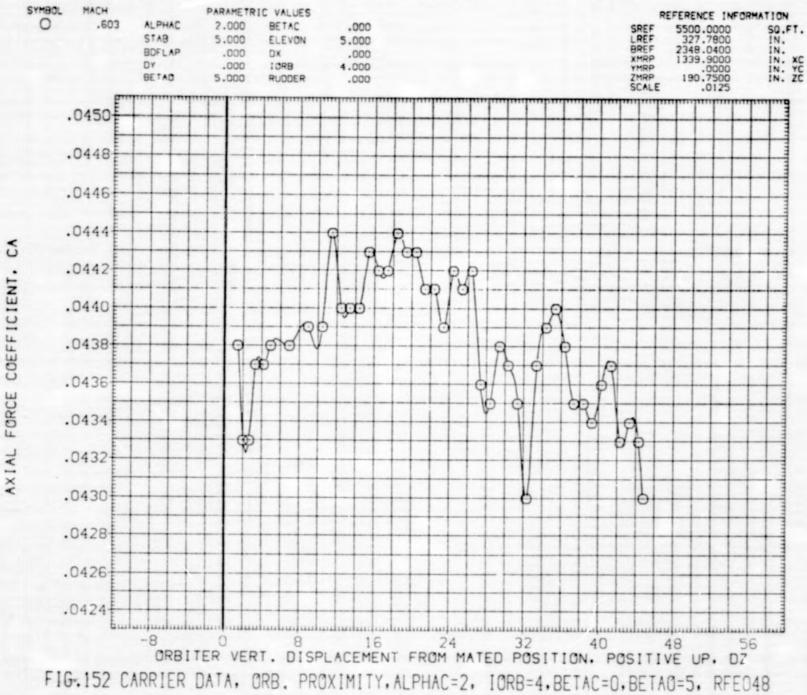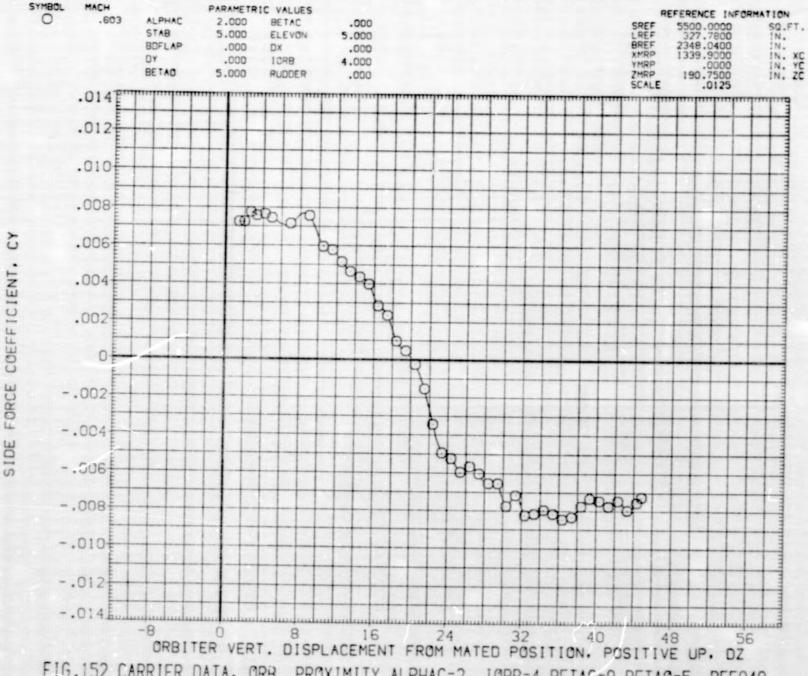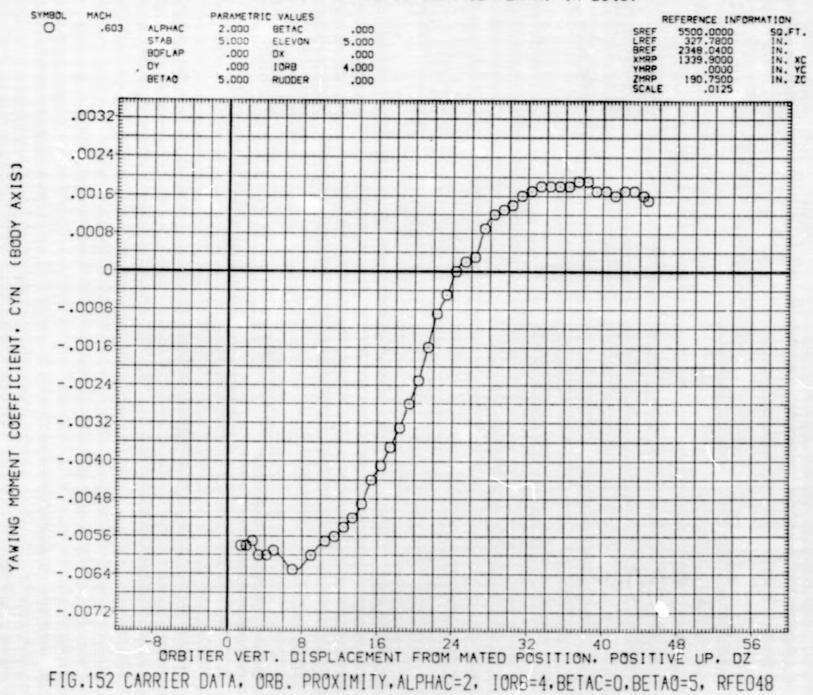
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LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE048)

FIG.152 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=5, RFE048

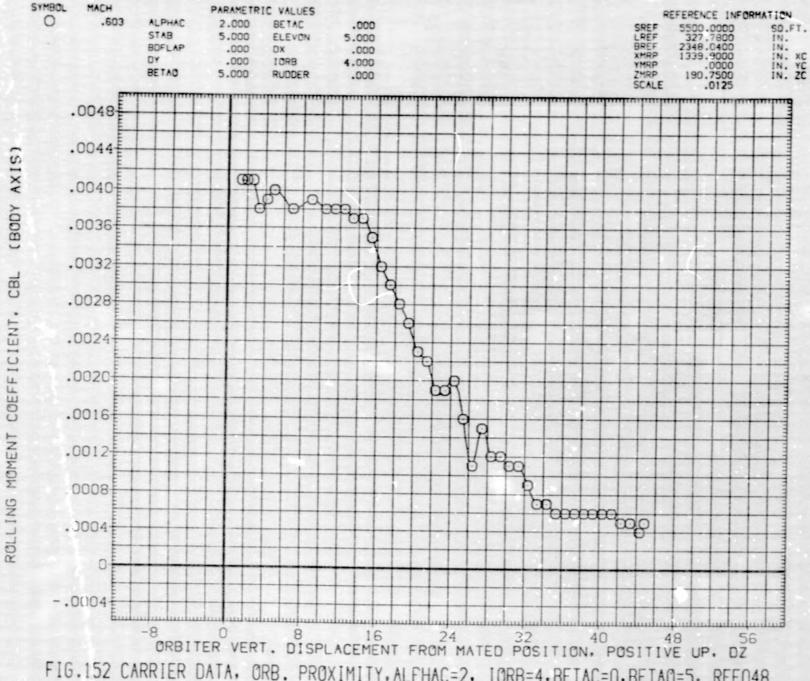LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE048)

FIG.152 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=4, BETAC=0, BETAO=5, RFE048

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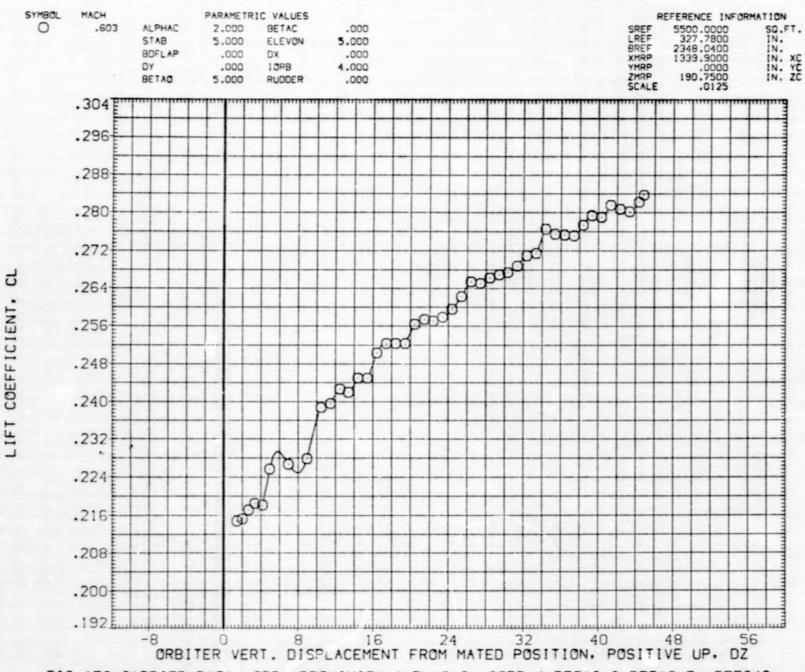LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE048)

FIG.152 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=5, RFE048

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE048)

FIG.152 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=4, BETAC=0, BETAO=5, RFE048

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LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO48)

FIG.152 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=5, RFEO48

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE048)

FIG.152 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=5, RFE048

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE048)

FIG.152 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=5, RFE048
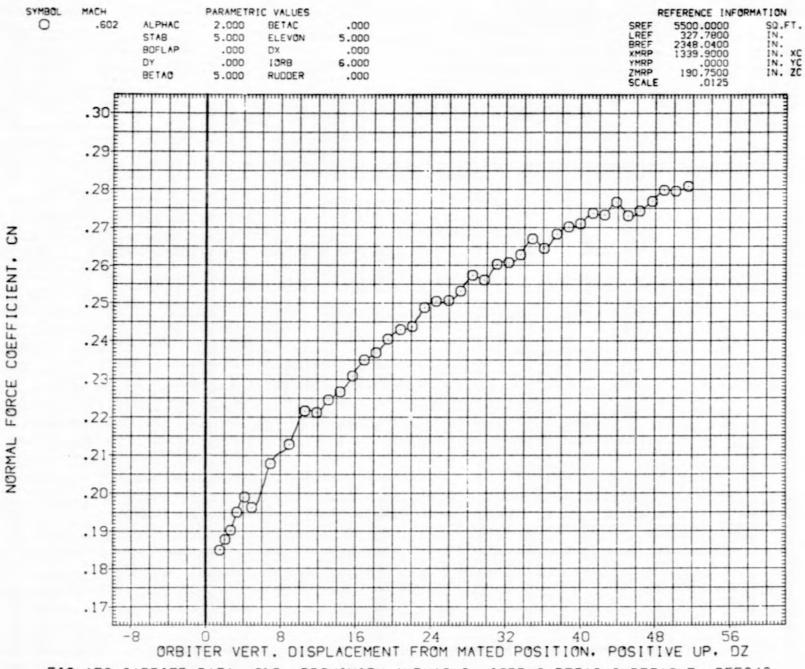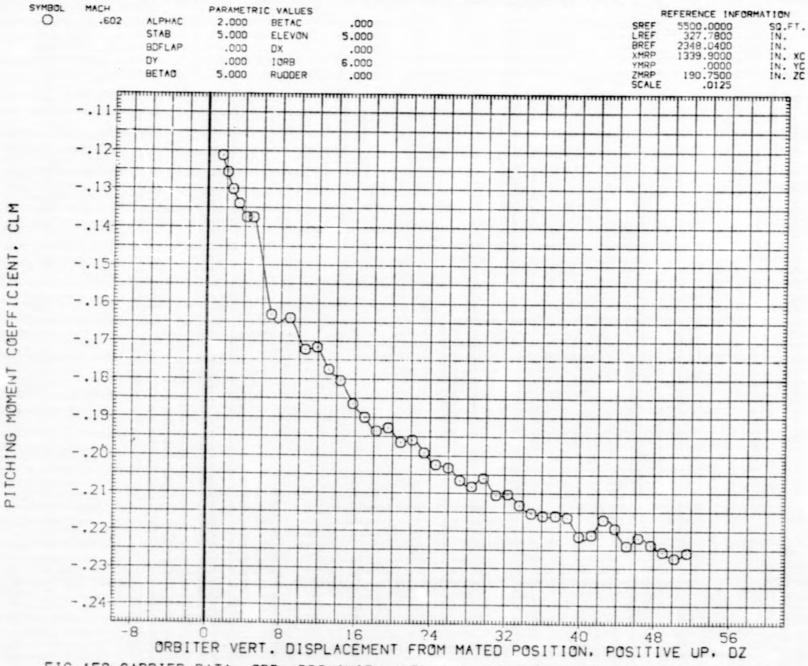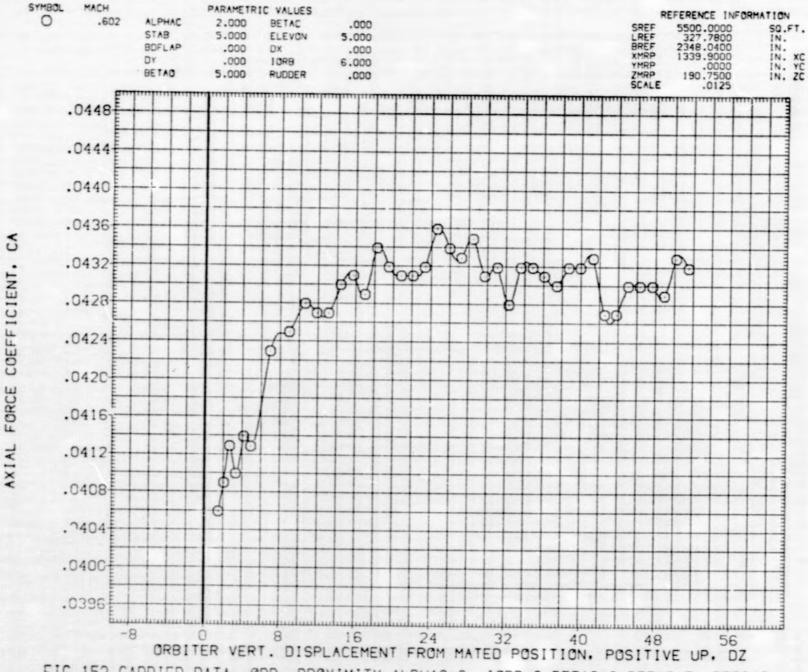
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE048)

FIG.152 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=5, RFE048

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE049)

FIG.153 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=5, RFE049

SYMBOL   MACH   PARAMETRIC VALUES   REFERENCE INFORMATION
  O   .602   ALPHAC   2.000   BETAC   .000   SREF   5500.0000   SQ.FT.
                 STAB   5.000   ELEVON   5.000   LREF   327.7800   IN.
                 BDFLAP   .000   DX   .000   BREF   2348.0400   IN.
                 DY   .000   IORB   6.000   XMRP   1339.9000   IN. XC
                 BETAO   5.000   RUDDER   .000   YMRP   .0000   IN. YC
                                                          ZMRP   190.7500   IN. ZC
                                                          SCALE   .0125
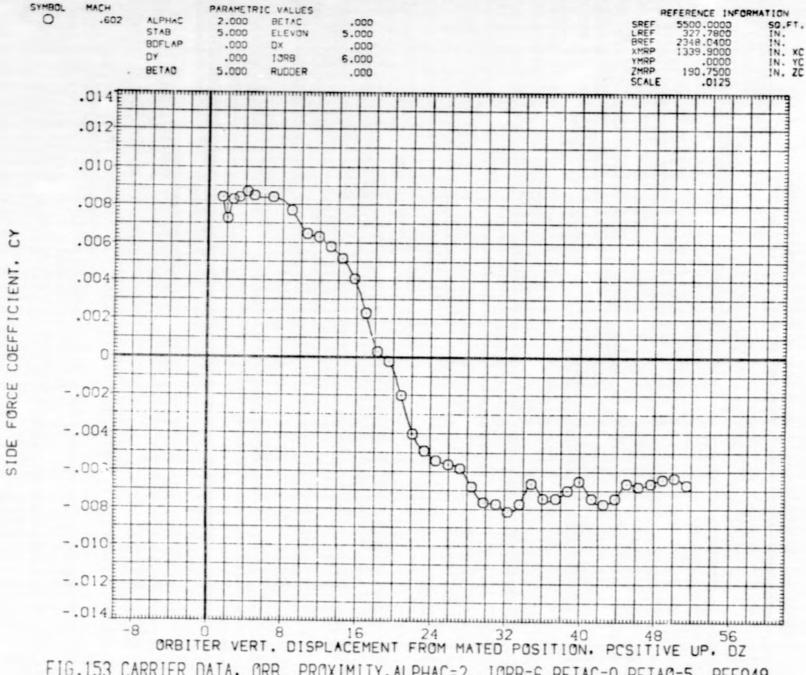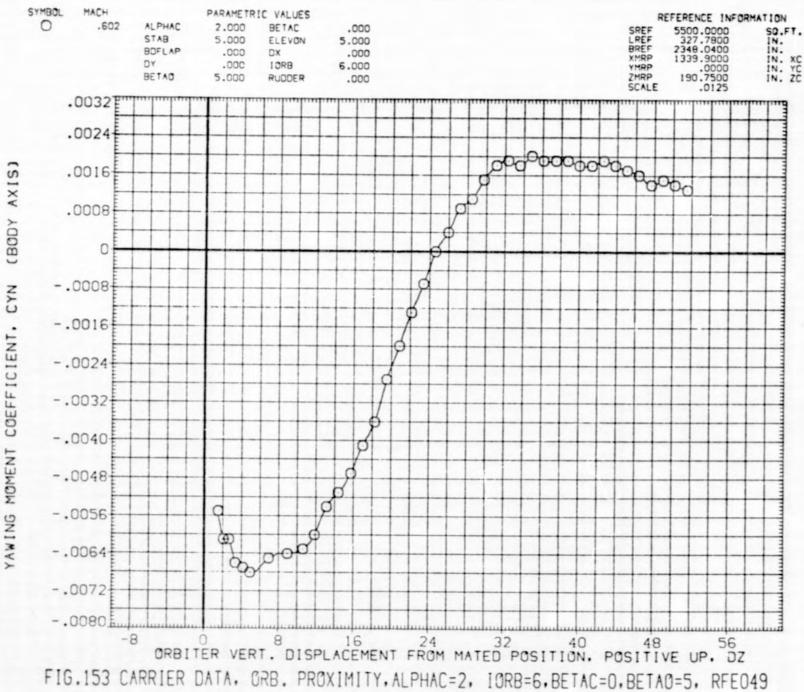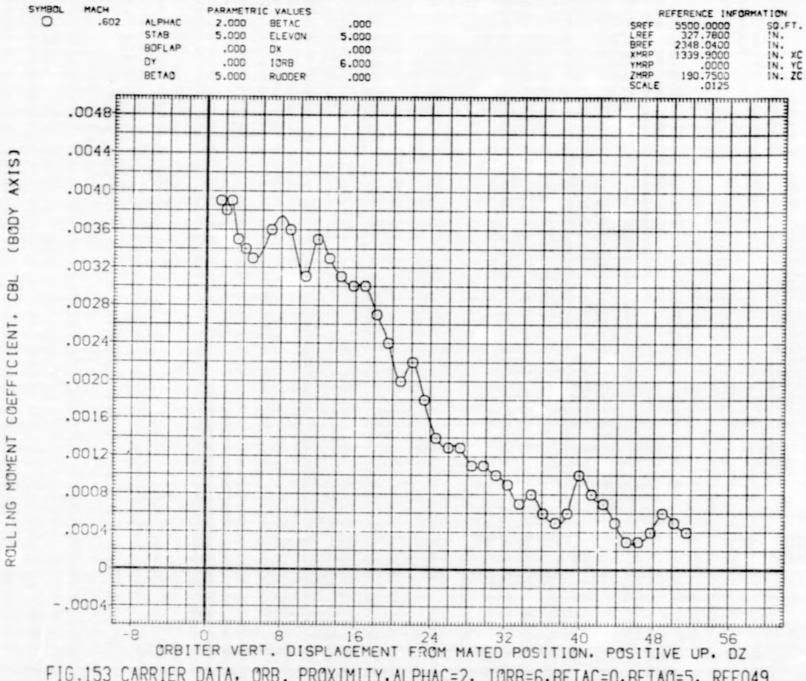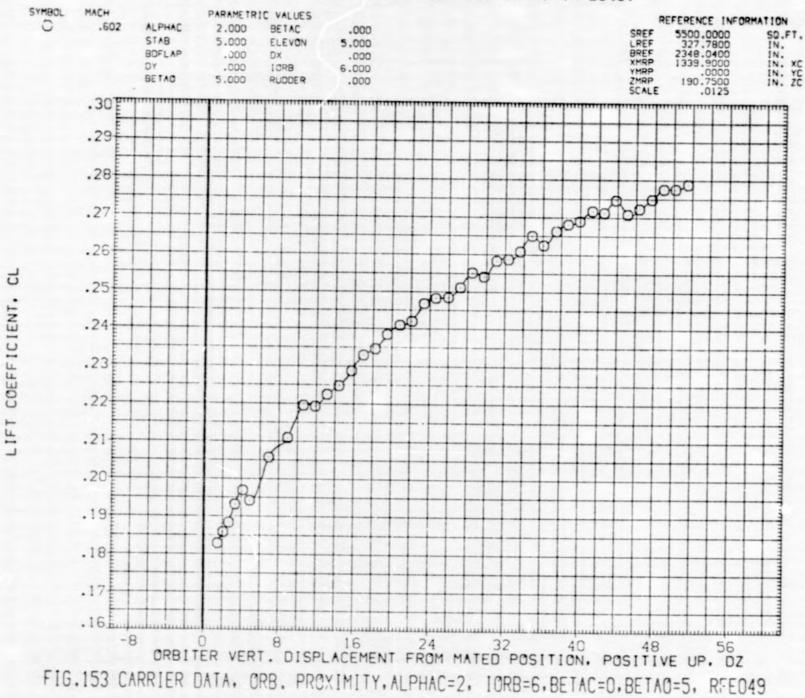

FIG.153 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=5, RFE049

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE049)

SYMBOL	MACH		PARAMETRIC VALUES		
O	.602	ALPHAC	2.000	BETAC	.000
		STAB	5.000	ELEVON	5.000
		BDFLAP	.000	DX	.000
		DY	.000	IORB	6.000
		BETAO	5.000	RUDDER	.000

REFERENCE INFORMATION
SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

FIG.153 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=5, RFE049

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE049)
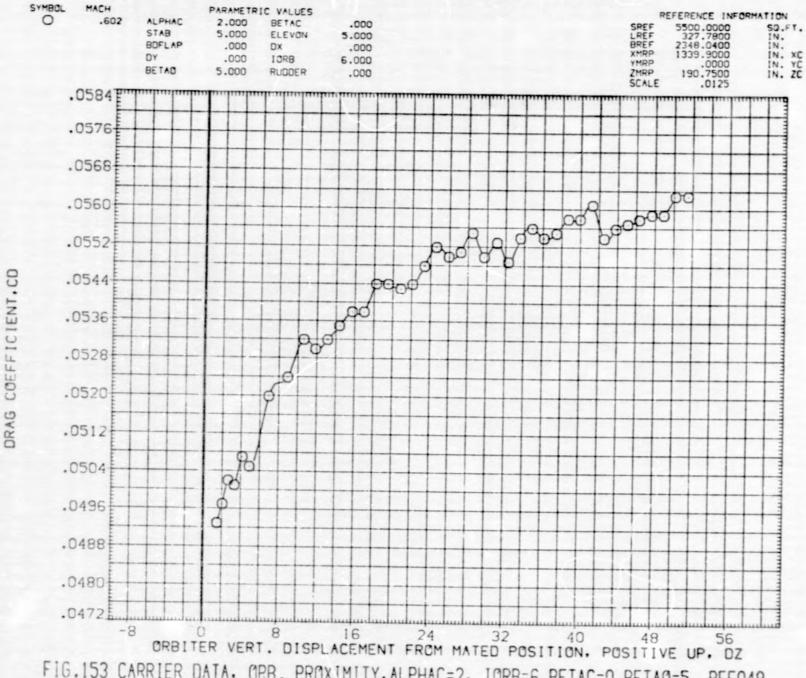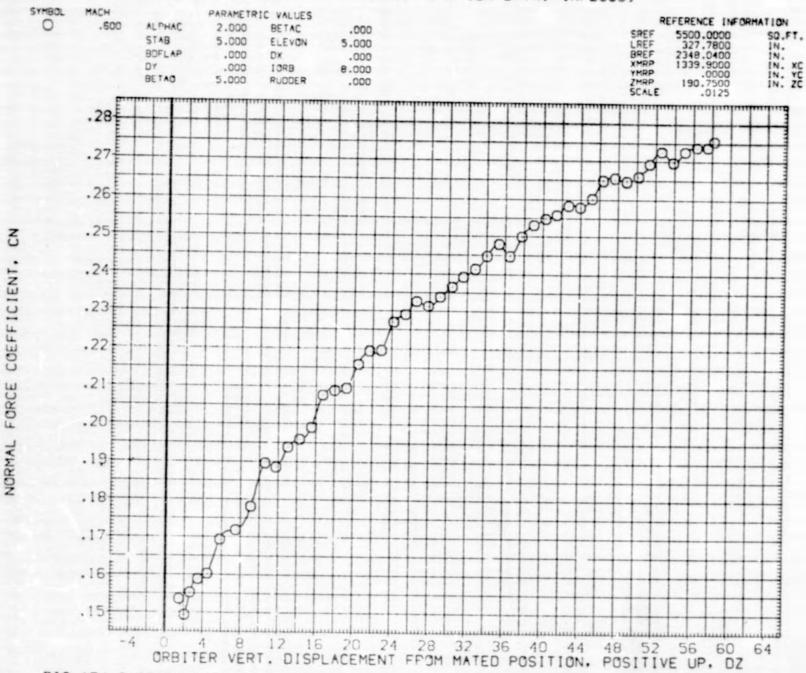
FIG.153 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=5, RFE049

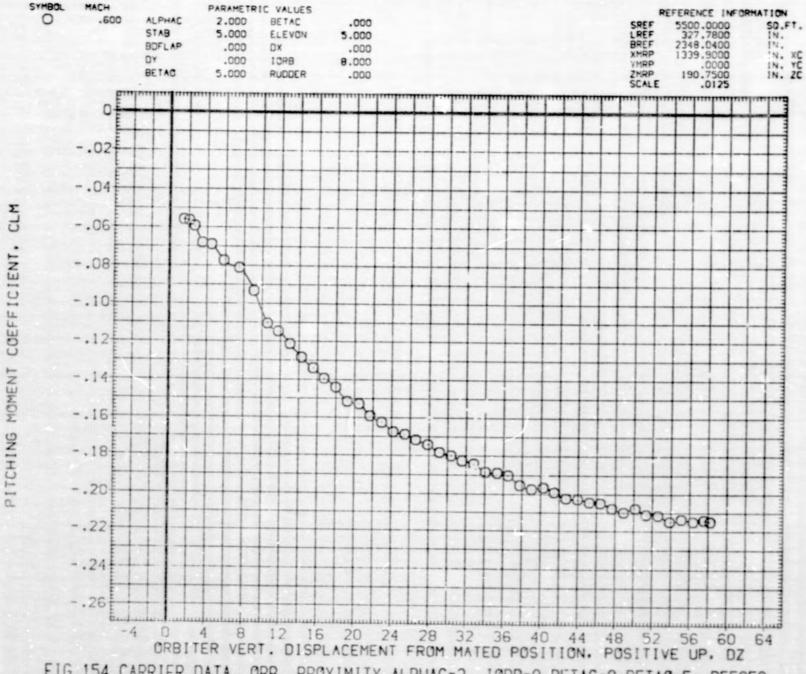LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE049)

FIG.153 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=5, RFE049

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE049)

FIG.153 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=5, RFE049

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE049)

FIG.153 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=5, RFE049
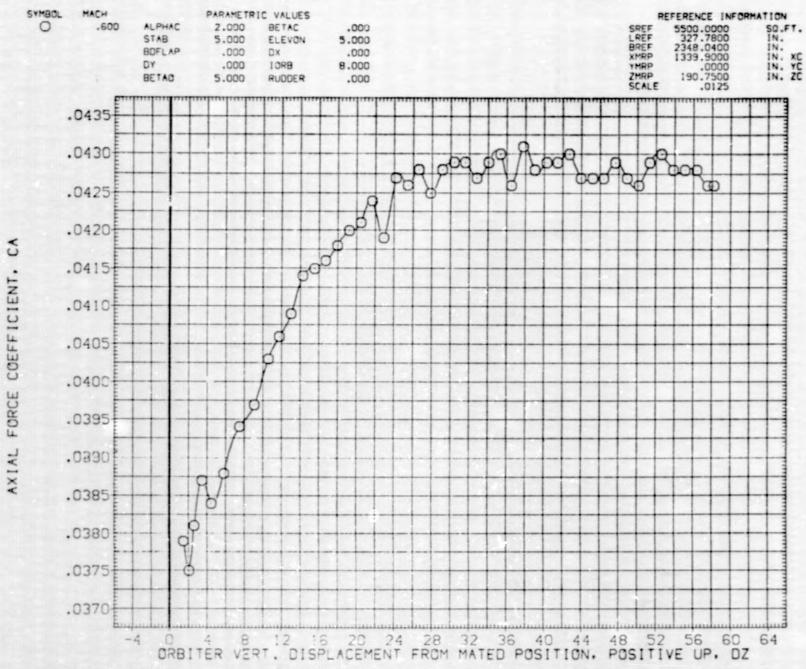
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE049)

FIG.153 CARRIER DATA, OPB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=5, RFE049

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FIG.154 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=8, BETAC=0, BETAO=5, RFE050

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE050)

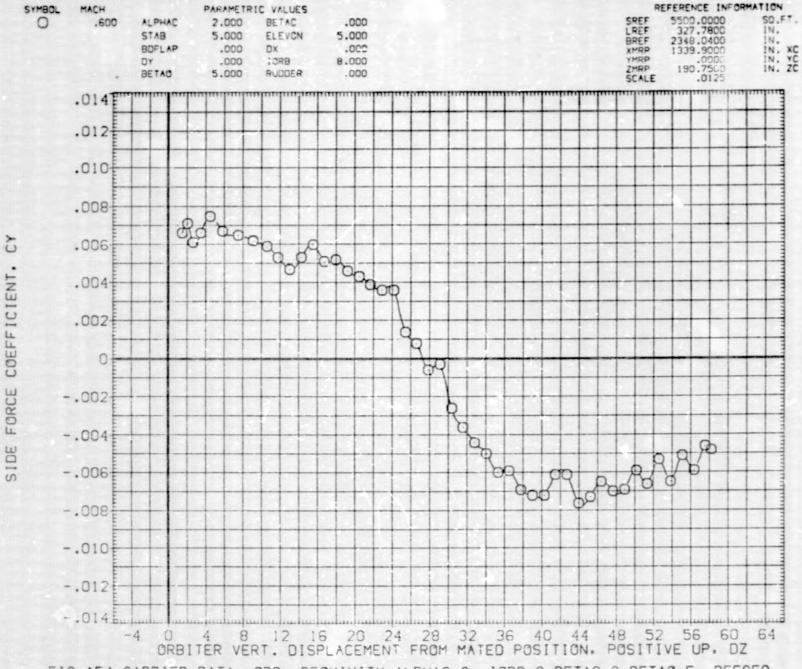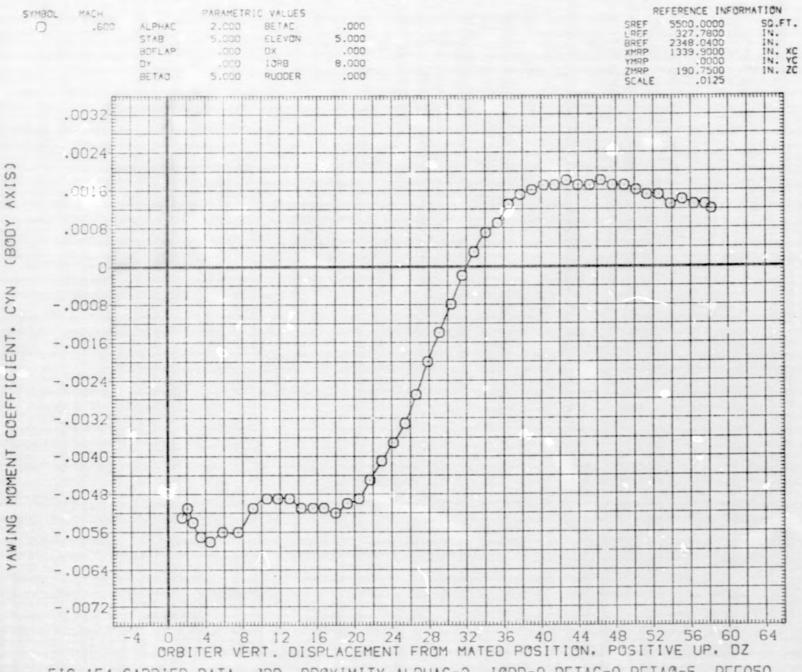| SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.600	ALPHAC	2.000	BETAC	.000	SREF	5500.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000	LREF	327.7800	IN.
		BDFLAP	.000	DX	.000	BREF	2348.0400	IN.
		DY	.000	IORB	8.000	XMRP	1339.9000	IN. XC
		BETAO	5.000	RUDDER	.000	YMRP	.0000	IN. YC
						ZMRP	190.7500	IN. ZC
						SCALE	.0125	

FIG.154 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=8,BETAC=0,BETAO=5, RFE050

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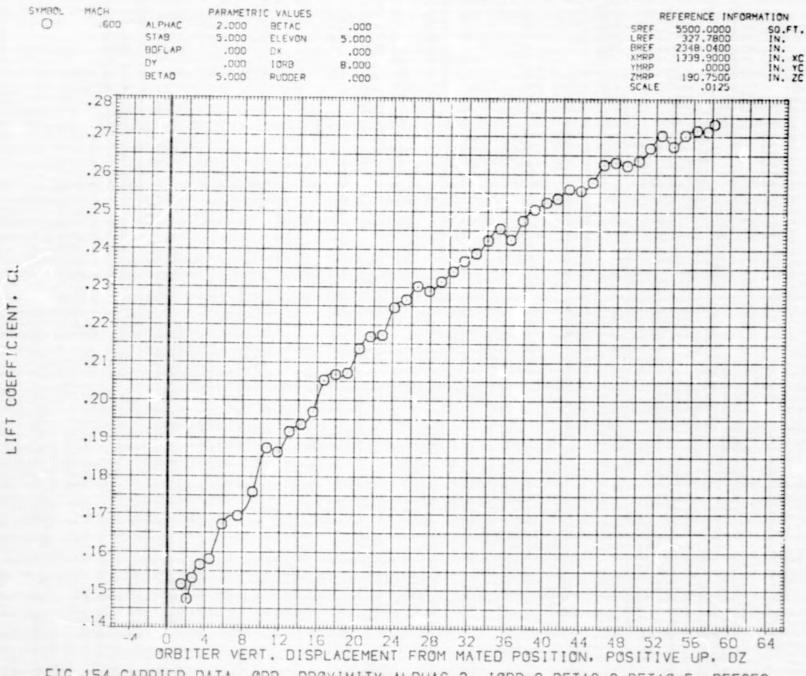
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE050)

FIG.154 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=8,BETAC=0,BETAO=5, RFE050
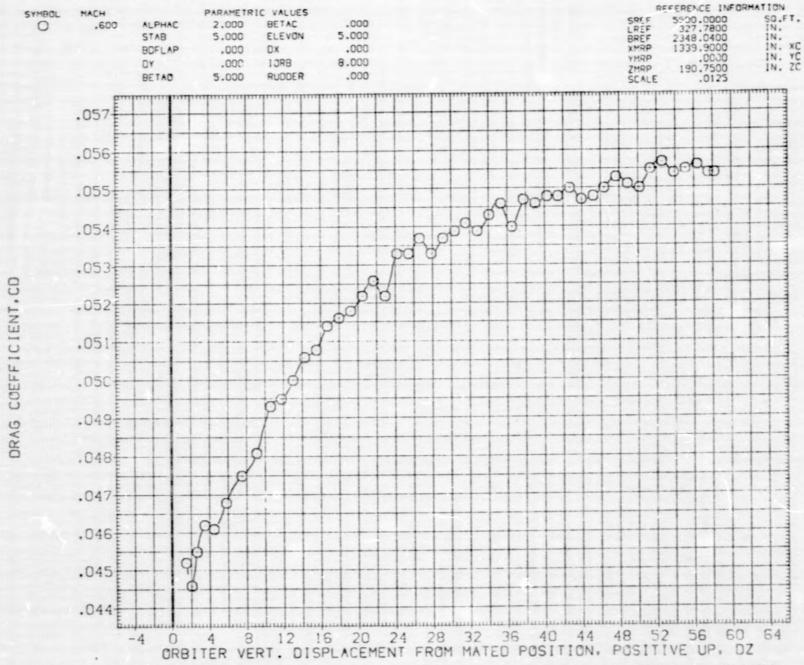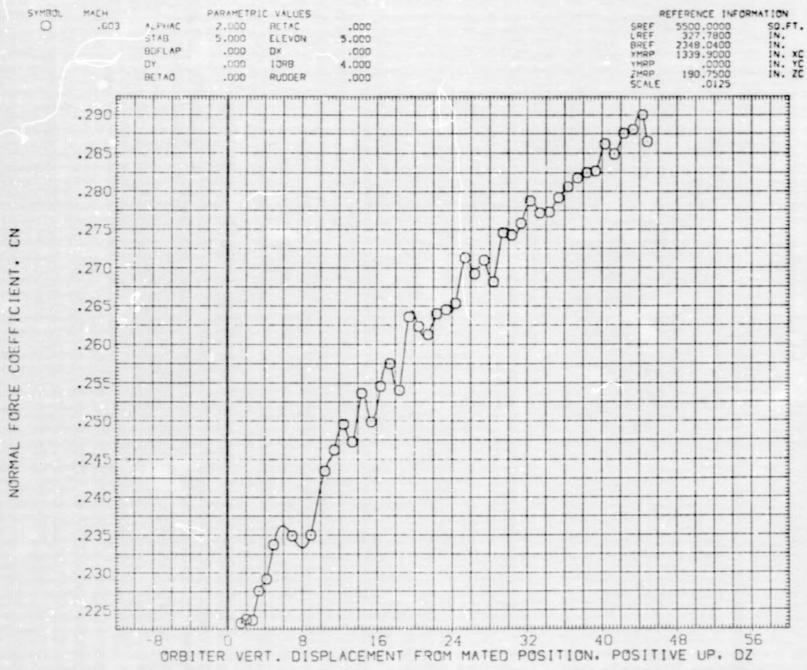
LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE050)

FIG.154 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=8,BETAC=0,BETAO=5, RFE050

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FIG.154 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=8,BETAC=0,BETAO=5, RFE050

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE050)

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
◯	.600	ALPHAC	2.000	BETAC	.000	SREF	5500.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000	LREF	327.7800	IN.
		BDFLAP	.000	DX	.000	BREF	2348.0400	IN.
		DY	.000	IORB	8.000	XMRP	1339.9000	IN. XC
		BETAO	5.000	RUDDER	.000	YMRP	.0000	IN. YC
						ZMRP	190.7500	IN. ZC
						SCALE	.0125	

FIG.154 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=8,BETAC=0,BETAO=5, RFE050

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE050)

FIG.154 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=8,BETAC=0,BETAO=5, RFE050

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE050)

FIG.154 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=8,BETAC=0,BETAO=5, RFE050
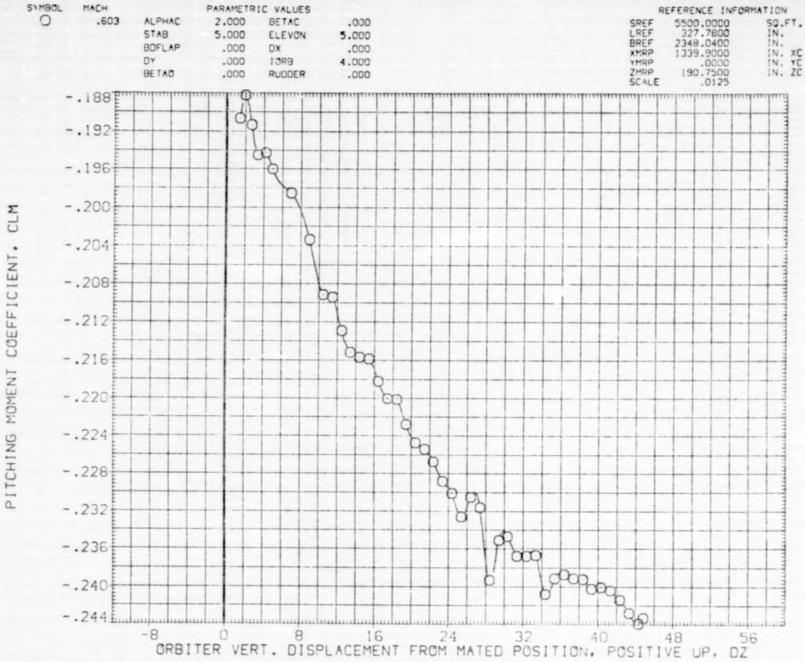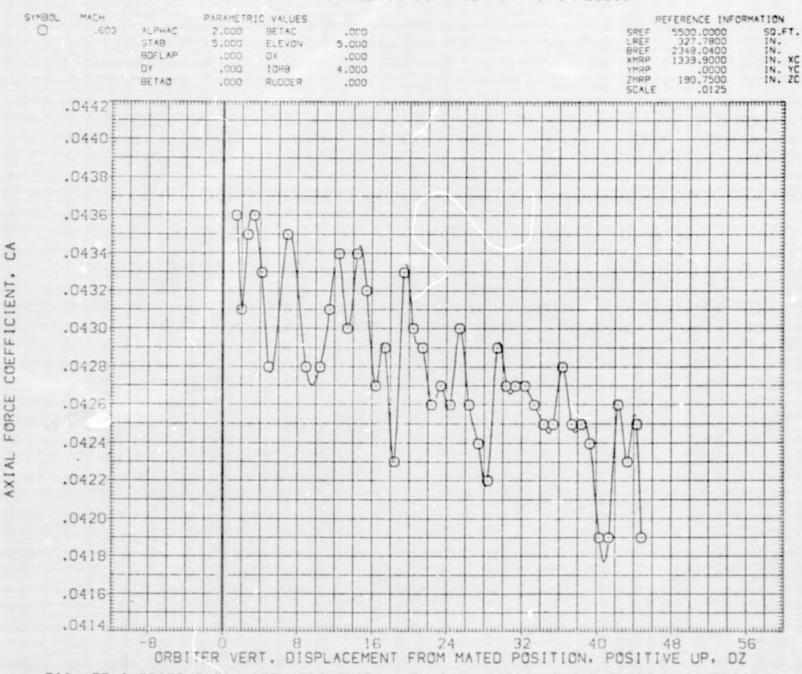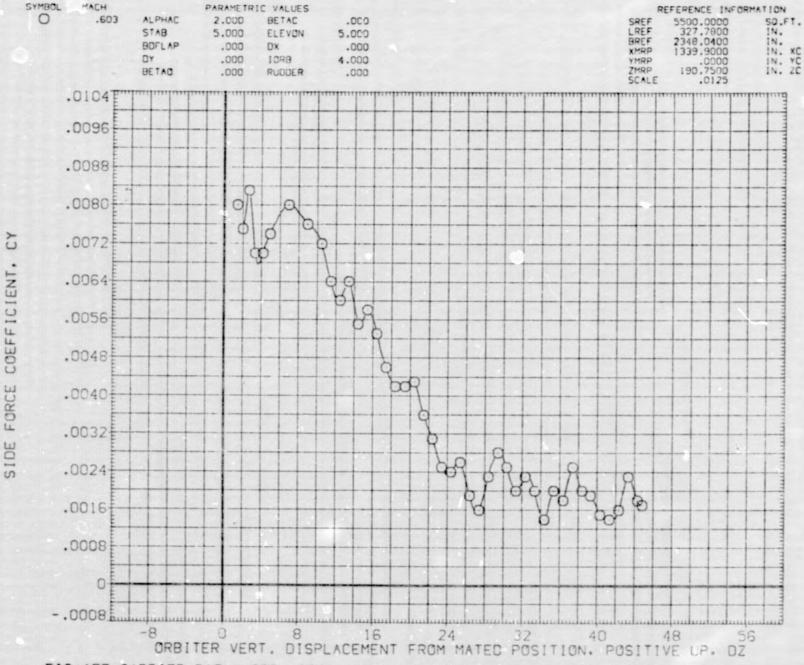
LTV44-559(CA26) 747/1 ATX O2 S1 (CARRIER DATA) (RFEO51)

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	.603	ALPHAC	2.000	BETAC	.000	SREF	5500.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000	LREF	327.7800	IN.
		BDFLAP	.000	DX	.000	BREF	2348.0400	IN.
		DY	.000	IORB	4.000	XMRP	1339.9000	IN. XO
		BETAO	.000	RUDDER	.000	YMRP	.0000	IN. YO
						ZMRP	190.7500	IN. ZO
						SCALE	.0125	

FIG.155 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFEO51

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LTV44-559(CA26) 747/1 ATX O2 S1 (CARRIER DATA) (RFEO51)

FIG.155 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFEO51

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LTV44-559(CA26) 747/1 ATX 02 S1 (CARRIER DATA) (RFE051)

FIG.155 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFE051
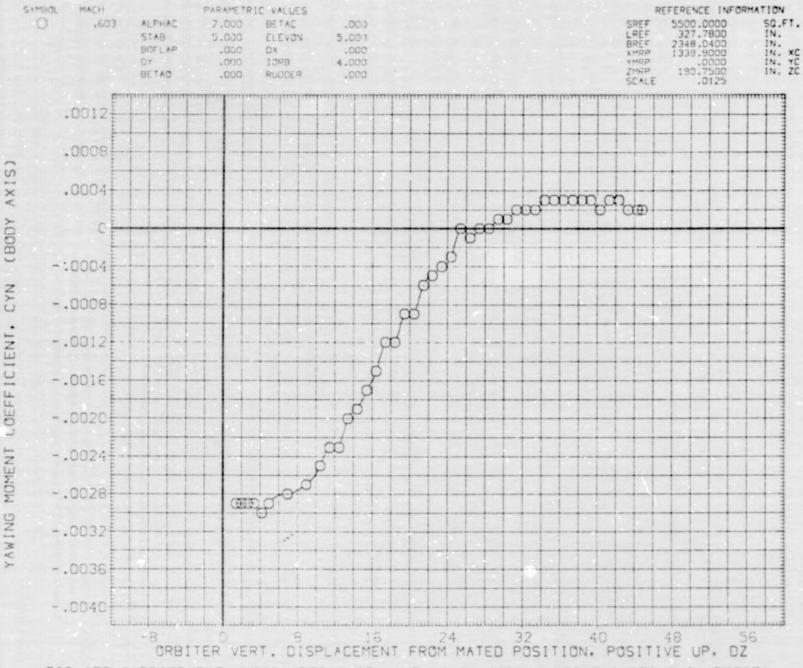
LTV44-559(CA26) 747/1 ATX O2 S1 (CARRIER DATA) (RFE051)

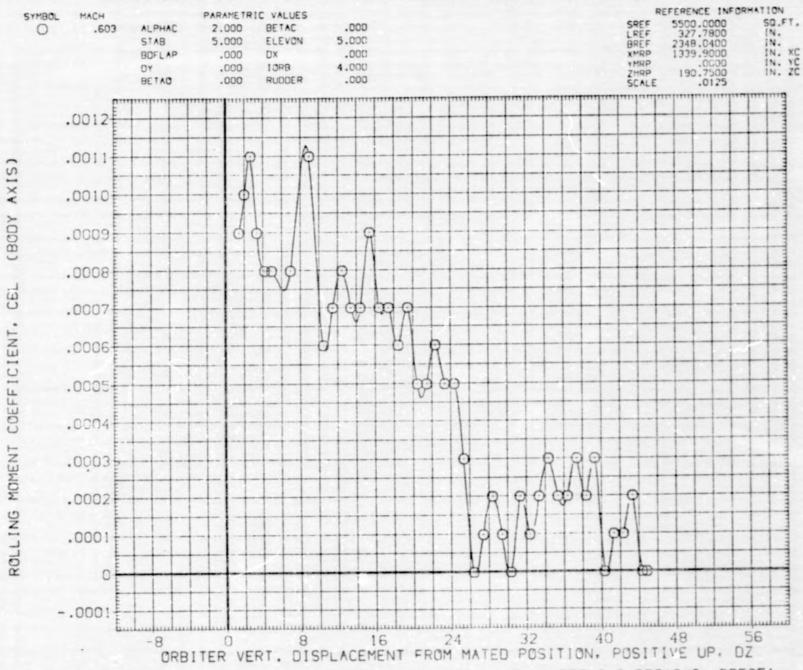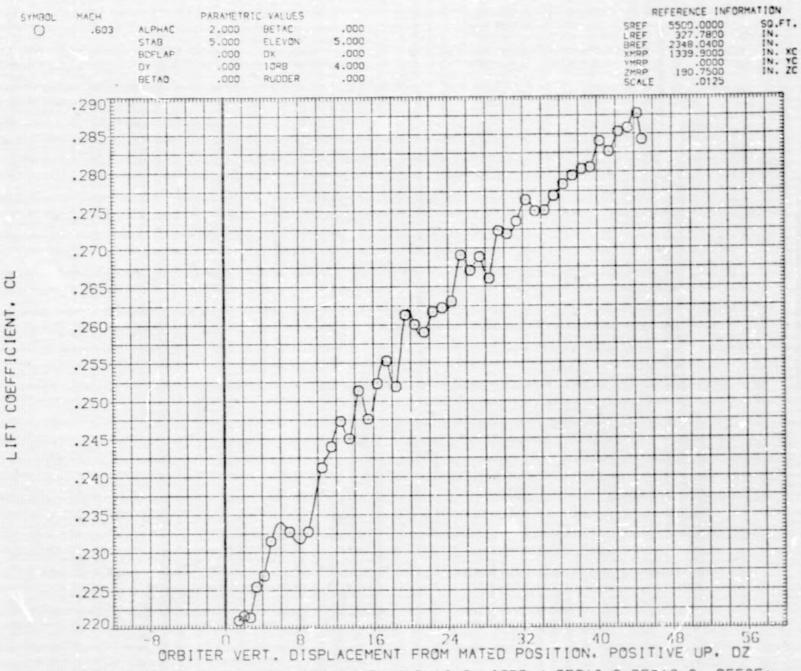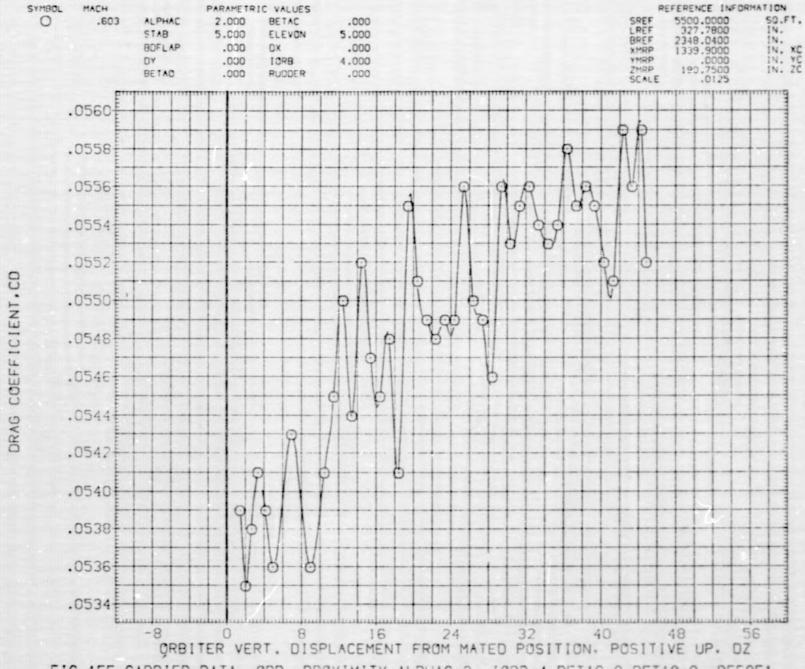FIG.155 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFE051
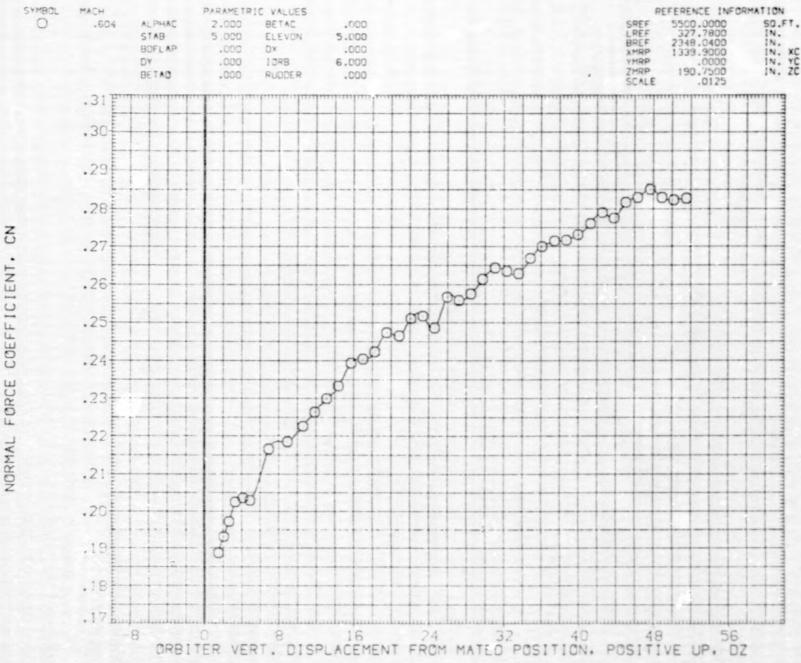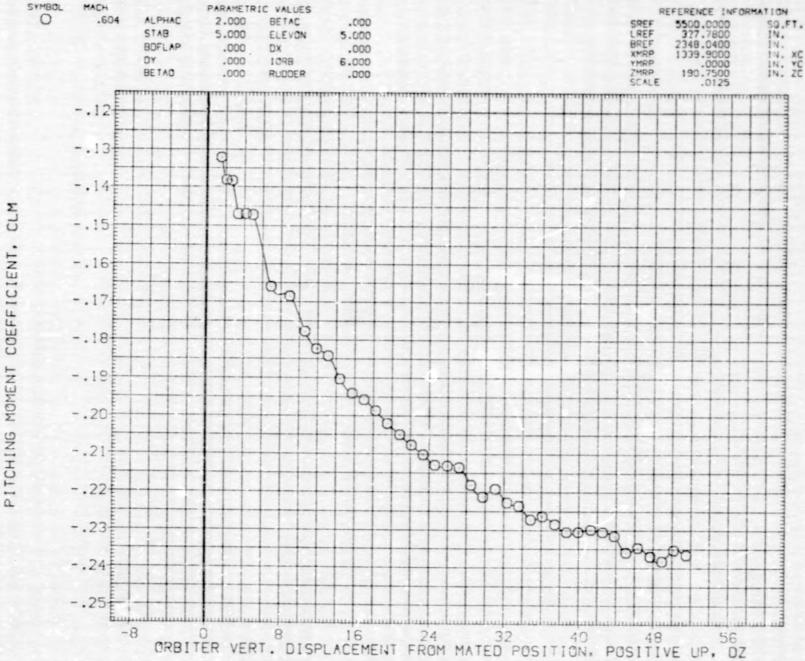
LTV44-559(CA26) 747/1 ATX 02 S1 (CARRIER DATA) (RFE051)

FIG.155 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFE051

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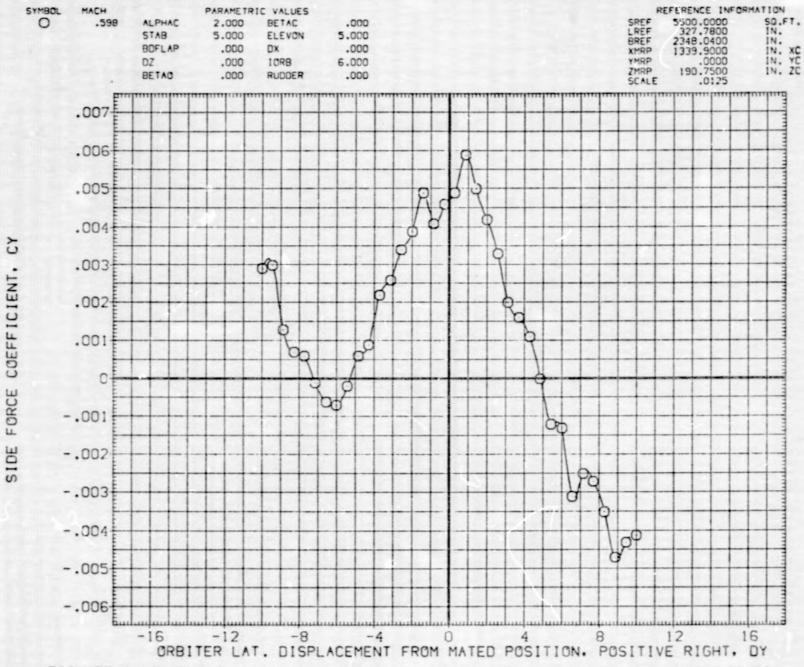
LTV44-559(CA26) 747/1 ATX 02 S1 [CARRIER DATA] [RFE051]

FIG.155 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=4, BETAC=0, BETAO=0, RFE051

LTV44-559(CA26) 747/1 ATX 02 S1 (CARRIER DATA) (RFE051)

FIG.155 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFE051

LTV44-559(CA26) 747/1 ATX O2 S1 (CARRIER DATA) (RFE051)

FIG.155 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=4,BETAC=0,BETAO=0, RFE051

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LTV44-559(CA26) 747/1 ATX O2 S1 (CARRIER DATA) (RFE052)

FIG.156 CARRIER DATA. ORB. PROXIMITY.ALPHAC=2, IORB=6.BETAC=O.BETAO=O, RFE052

LTV44-559(CA26) 747/1 ATX   O2 S1 (CARRIER DATA) (RFE052)
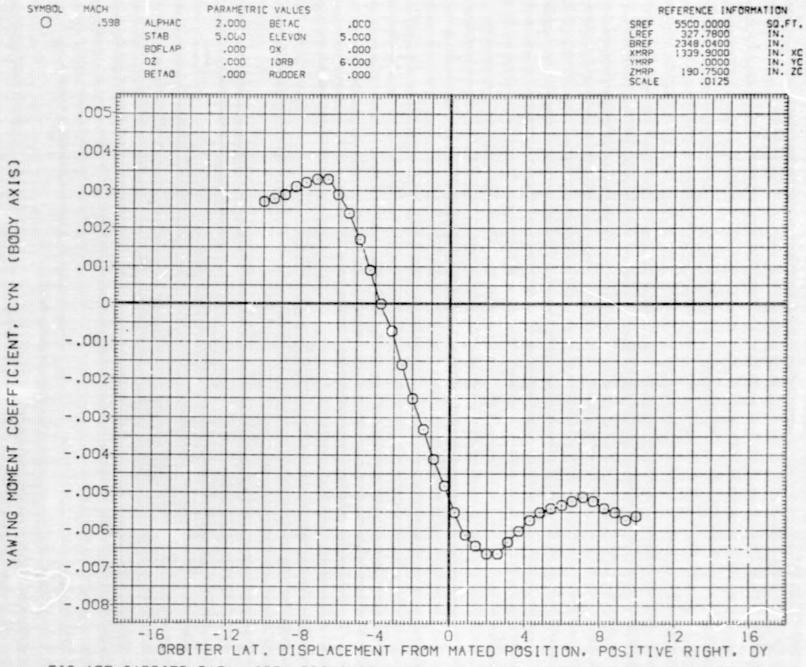
FIG.156 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=0, RFE052

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE053)

FIG.157 CARRIER DATA, CRB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, RFE053
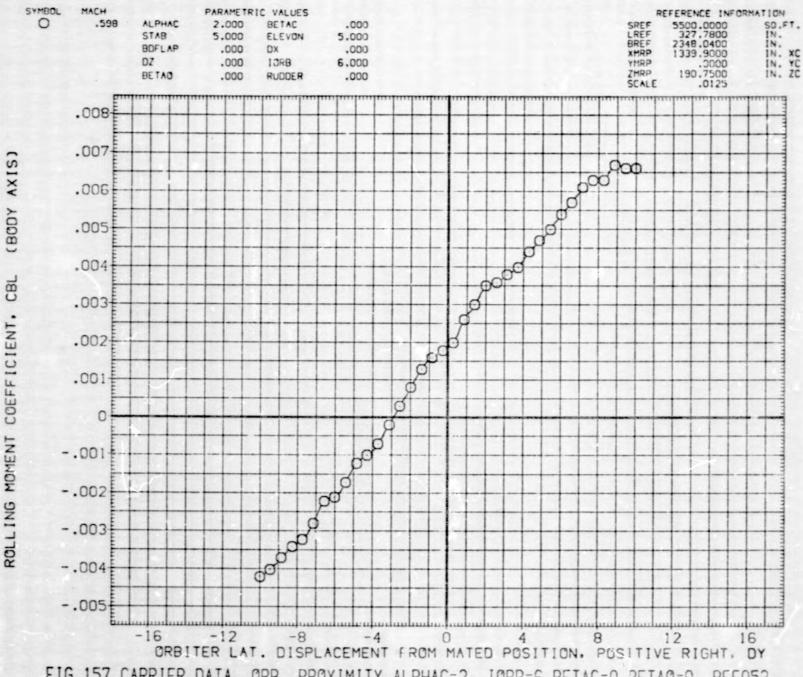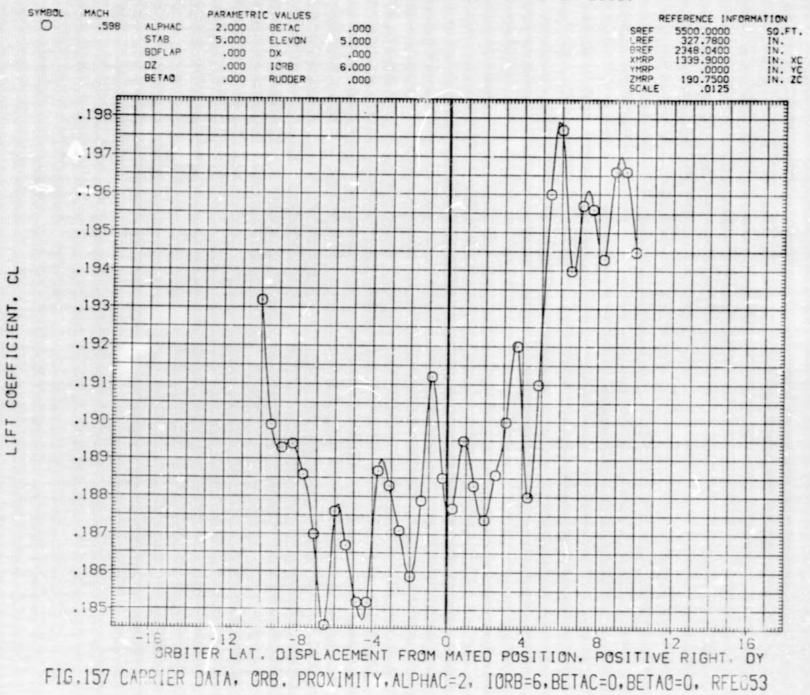
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE053)

FIG.157 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, RFE053

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LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE053)

FIG.157 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, RFE053

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE053)
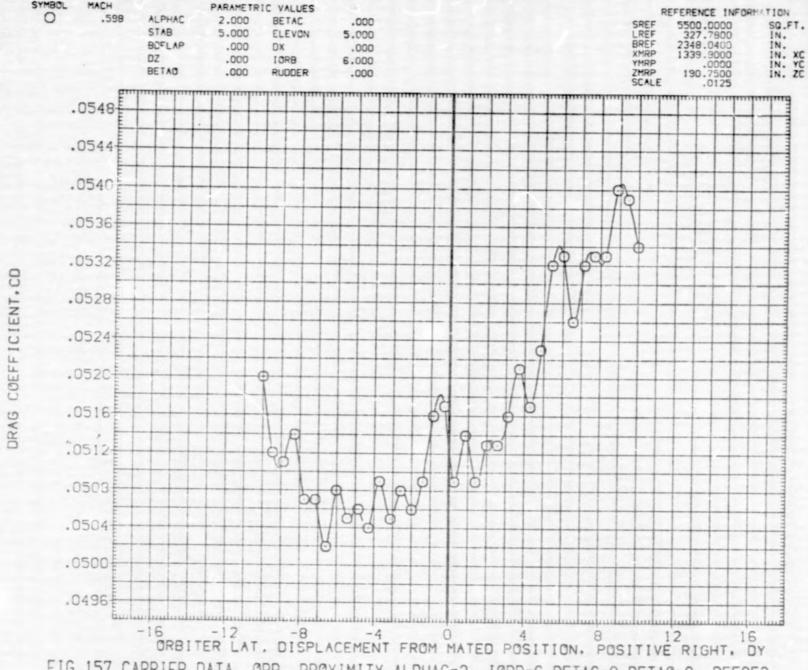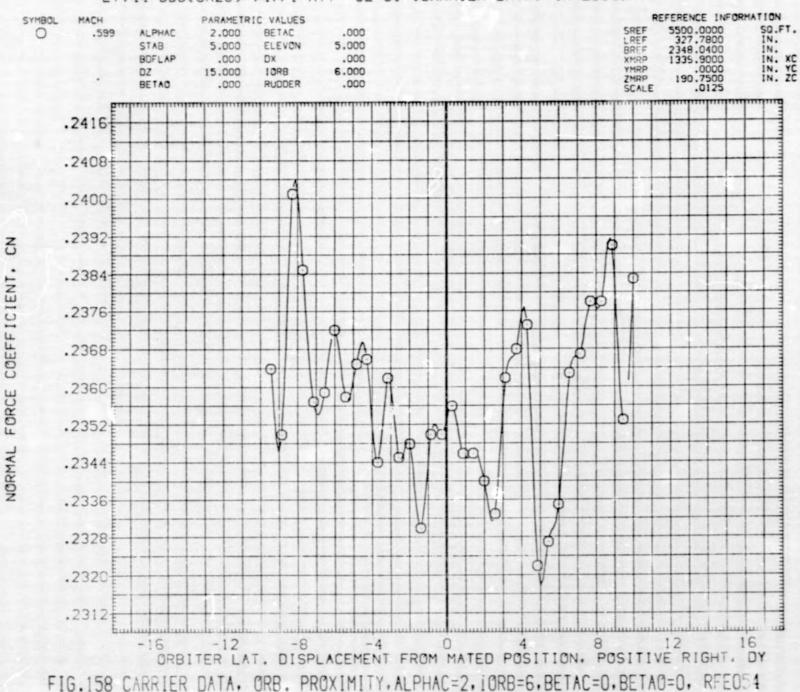
FIG.157 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, RFE053

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE053)

FIG.157 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=O,BETAO=O, RFE053

LTV44-559(CA26) 747/1 ATY 02 SI (CARRIER DATA) (RFE053)
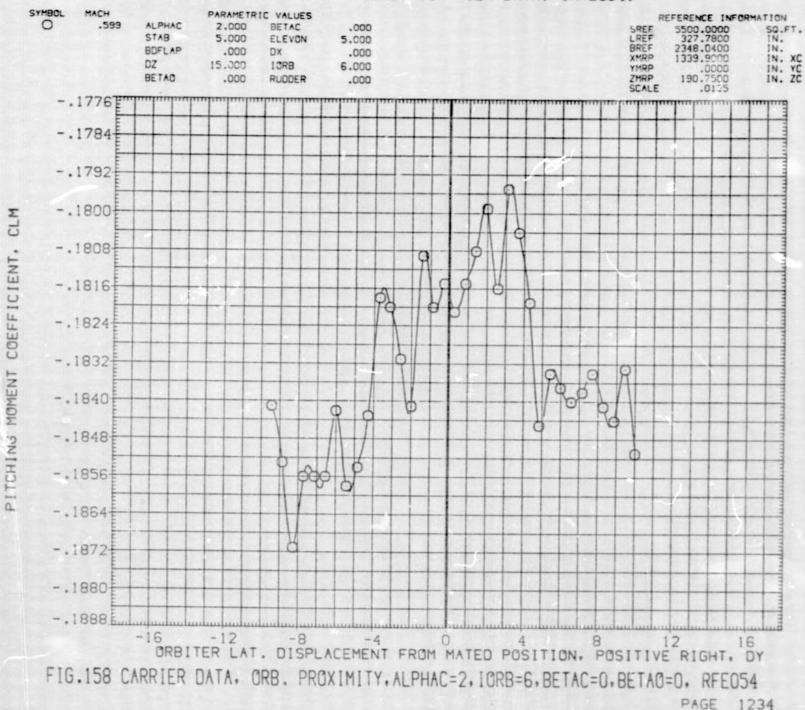
FIG.157 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2, IORB=6,BETAC=0,BETAO=0, RFE053

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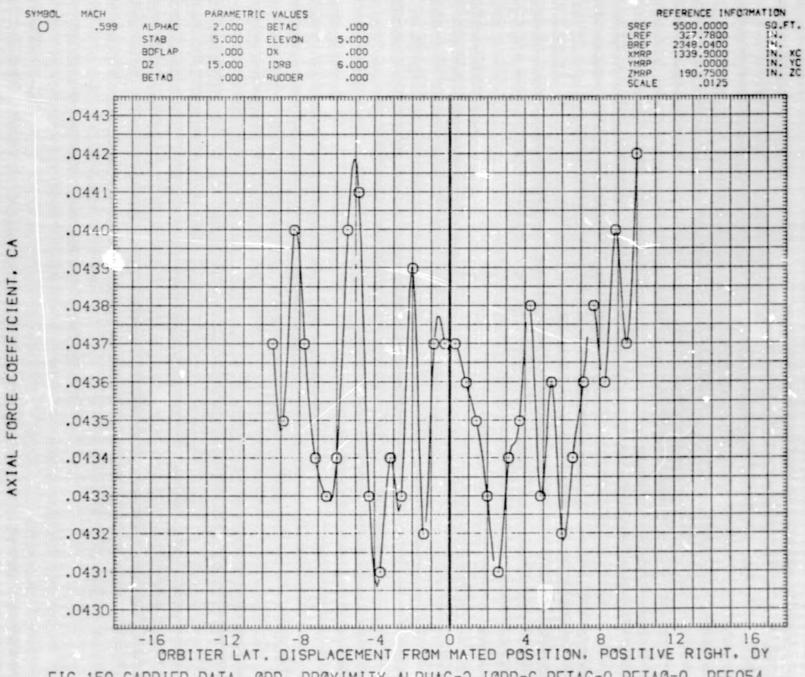
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE054)

FIG.158 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE054

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE054)

FIG.158 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE054

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE054.

FIG.158 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETA0=0, RFE054

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE054)

FIG.158 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, RFE054

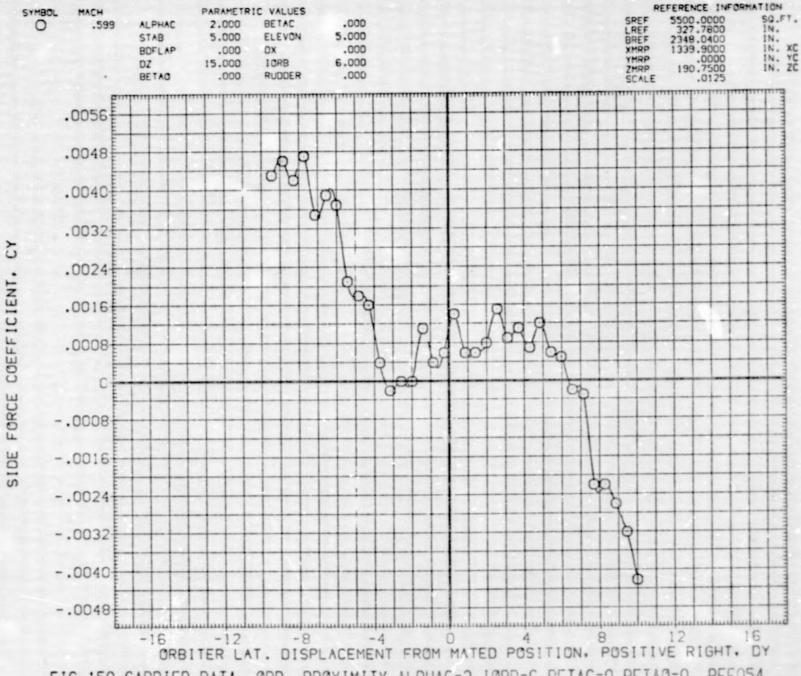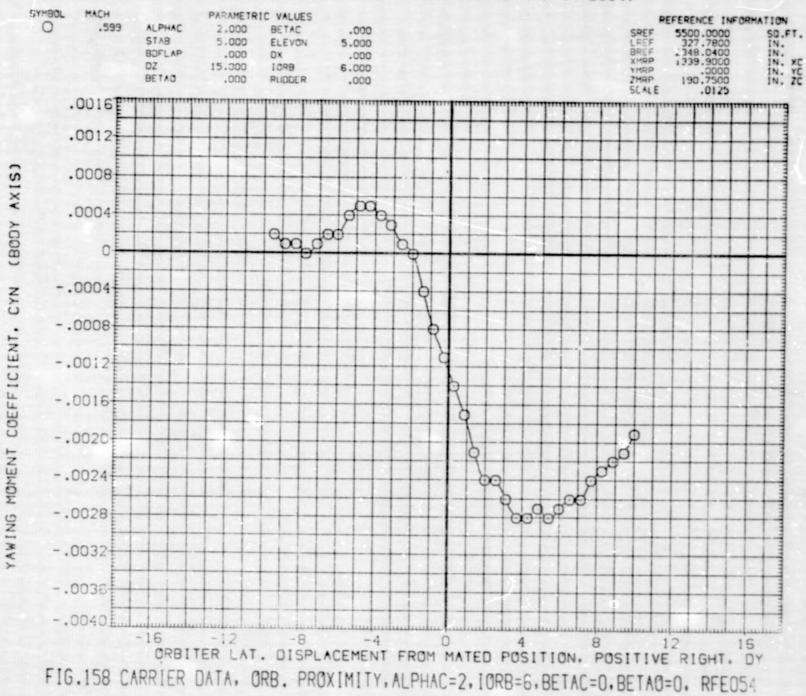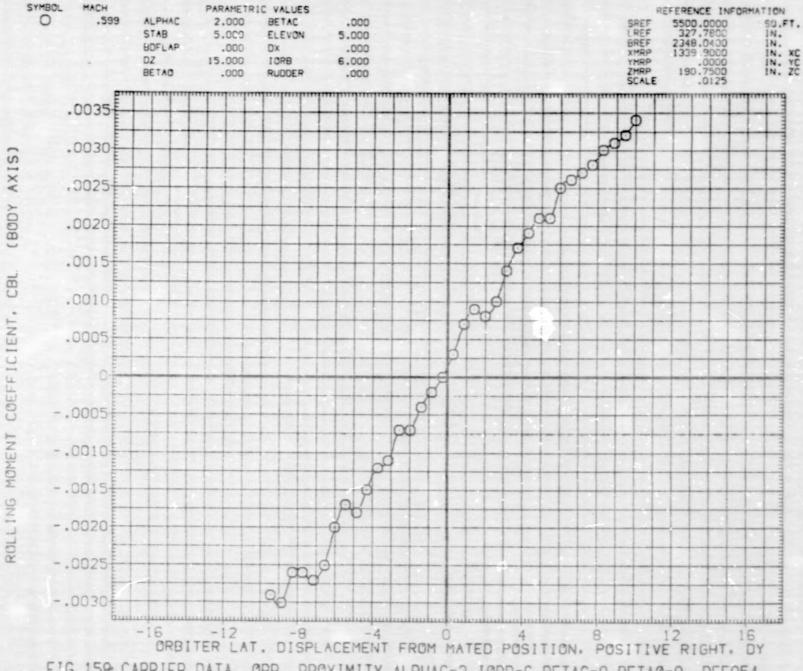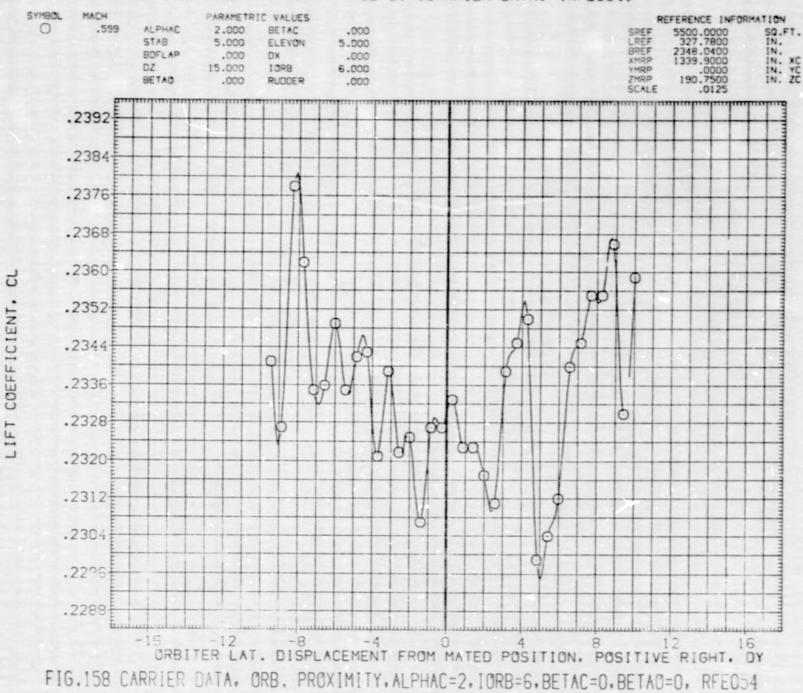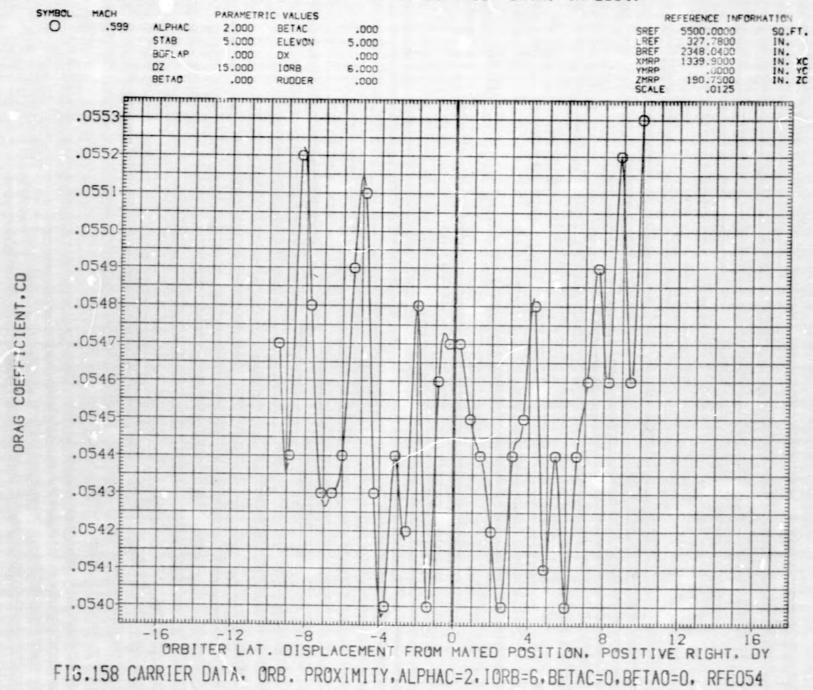LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE054)

FIG.158 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE054

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE054)

SYMBOL   MACH   PARAMETRIC VALUES   REFERENCE INFORMATION
  O   .599   ALPHAC   2.000   BETAC   .000   SREF   5500.0000   SQ.FT.
                 STAB   5.000   ELEVON   5.000   LREF   327.7800   IN.
                 BDFLAP   .000   DX   .000   BREF   2348.0400   IN.
                 DZ   15.000   IORB   6.000   XMRP   1339.9000   IN. XC
                 BETAO   .000   RUDDER   .000   YMRP   .0000   IN. YC
                                                               ZMRP   190.7500   IN. ZC
                                                               SCALE   .0125

ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

ORBITER LAT. DISPLACEMENT FROM MATED POSITION, POSITIVE RIGHT, DY

FIG.158 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE054

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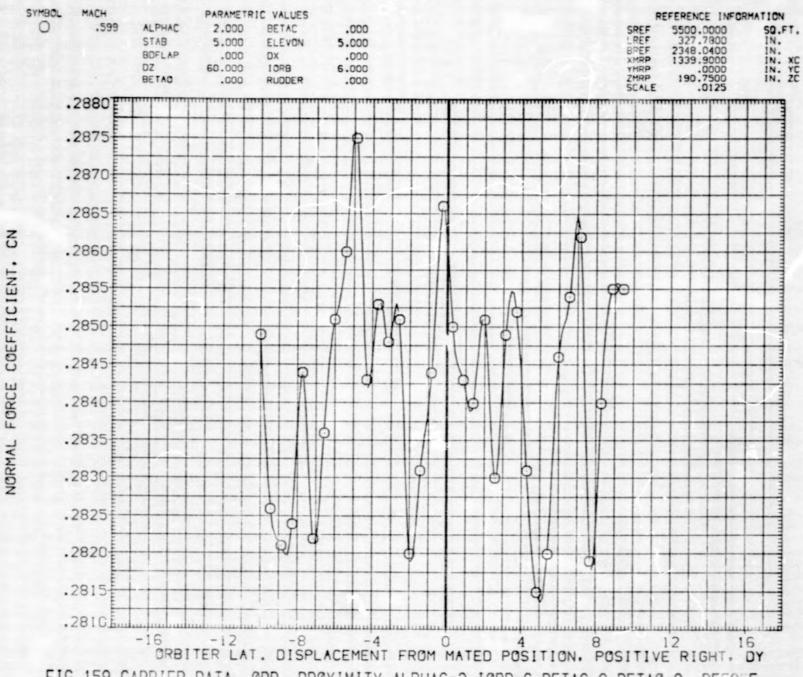
LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE054)

FIG.158 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE054
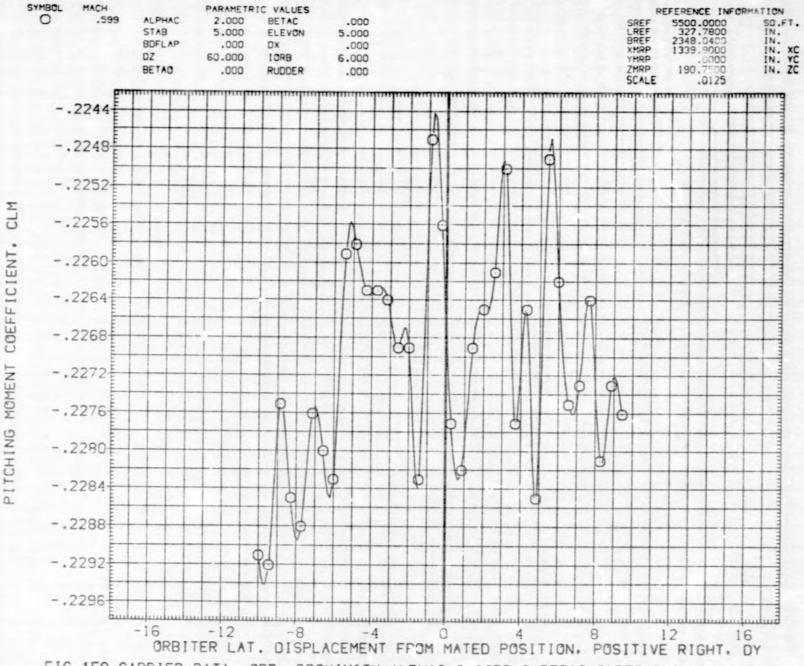
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE054)

FIG.158 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE054

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE055)

FIG.159 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETA0=0, RFE055
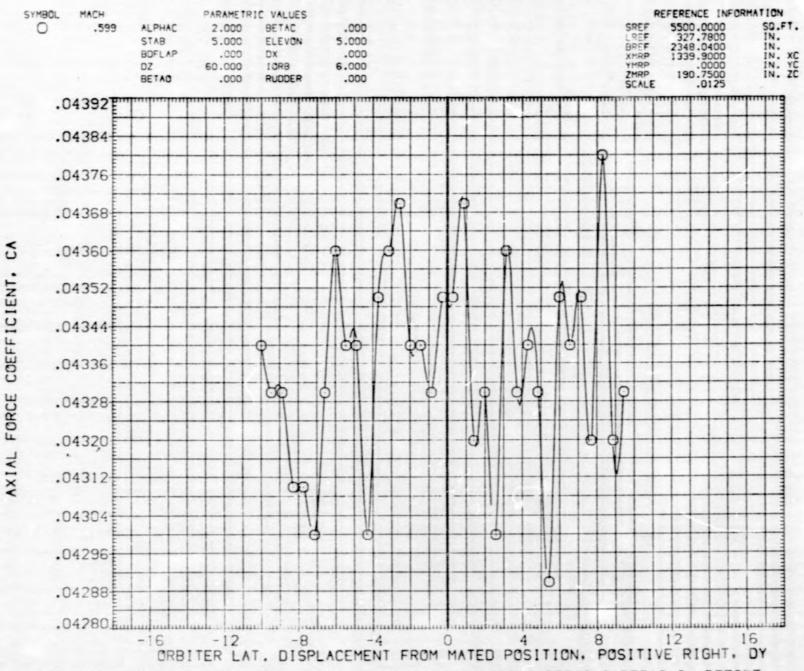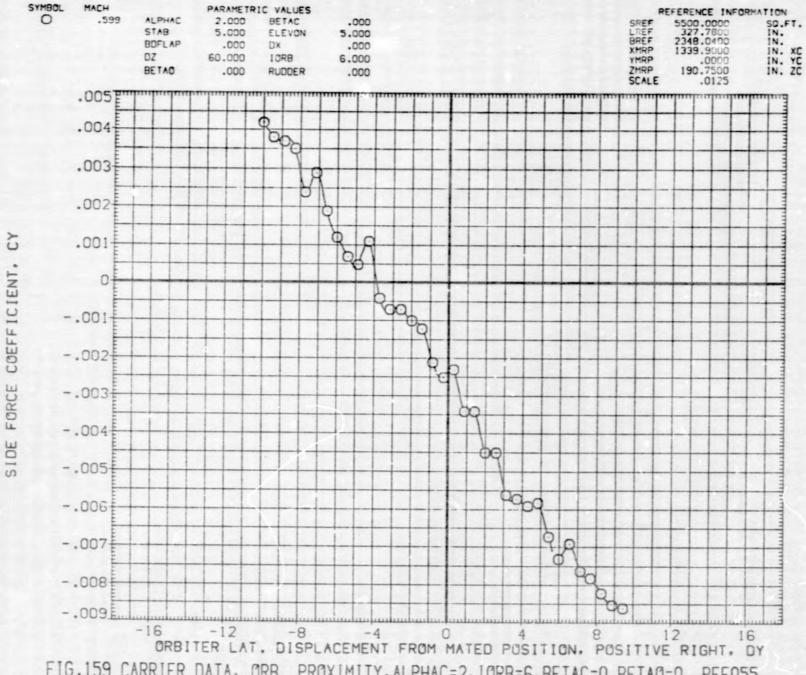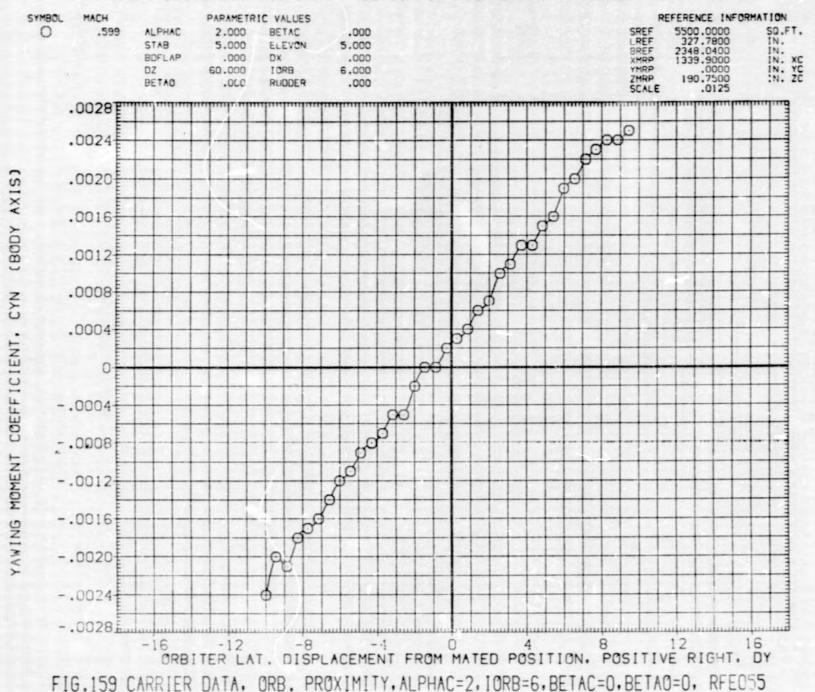
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE055)

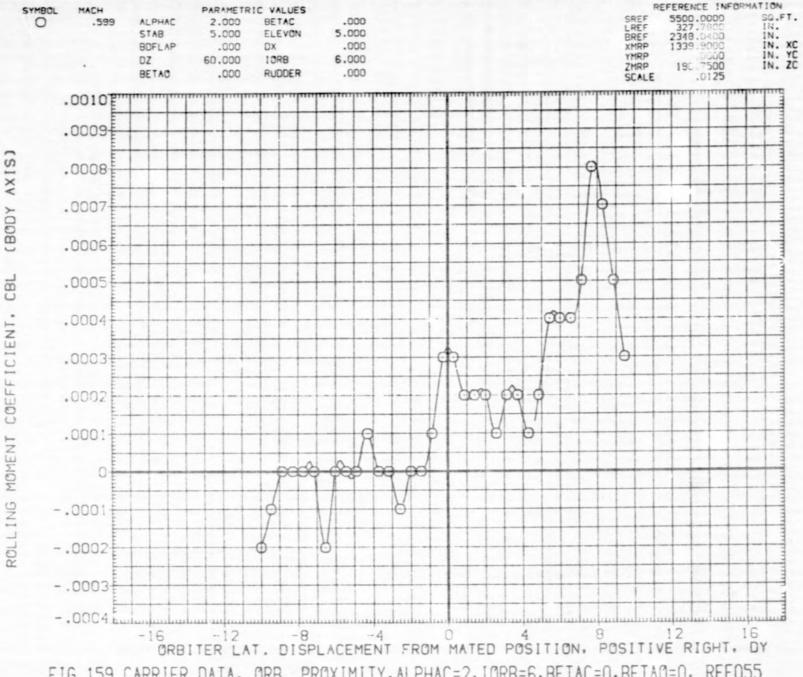| SYMBOL	MACH	PARAMETRIC VALUES					REFERENCE INFORMATION		
O	.599	ALPHAC	2.000	BETAC	.000	SREF	5500.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000	LREF	327.7800	IN.
		BDFLAP	.000	DX	.000	BREF	2348.0400	IN.
		DZ	60.000	IORB	6.000	XMRP	1339.9000	IN. XC
		BETAO	.000	RUDDER	.000	YMRP	.0000	IN. YC
						ZMRP	190.7500	IN. ZC
						SCALE	.0125	

FIG.159 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, RFE055

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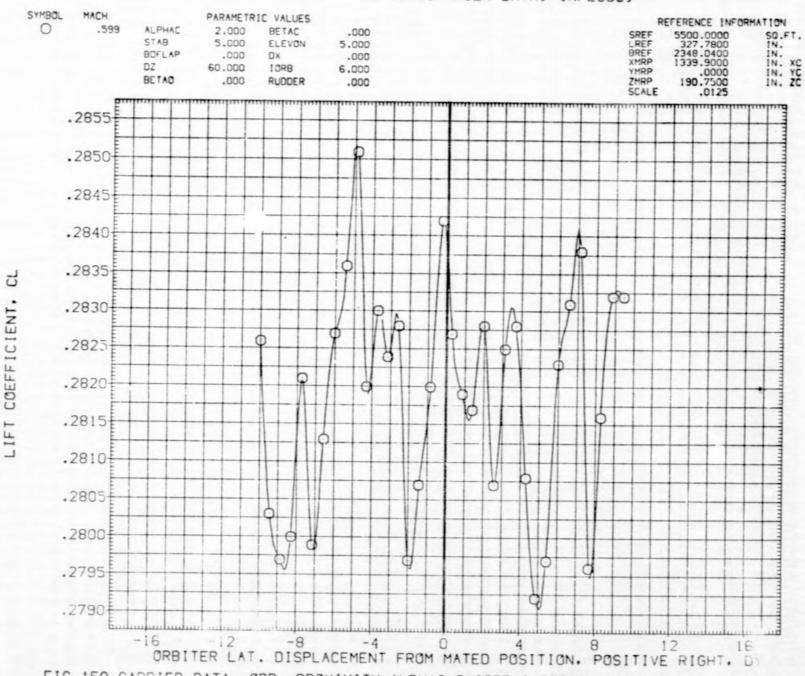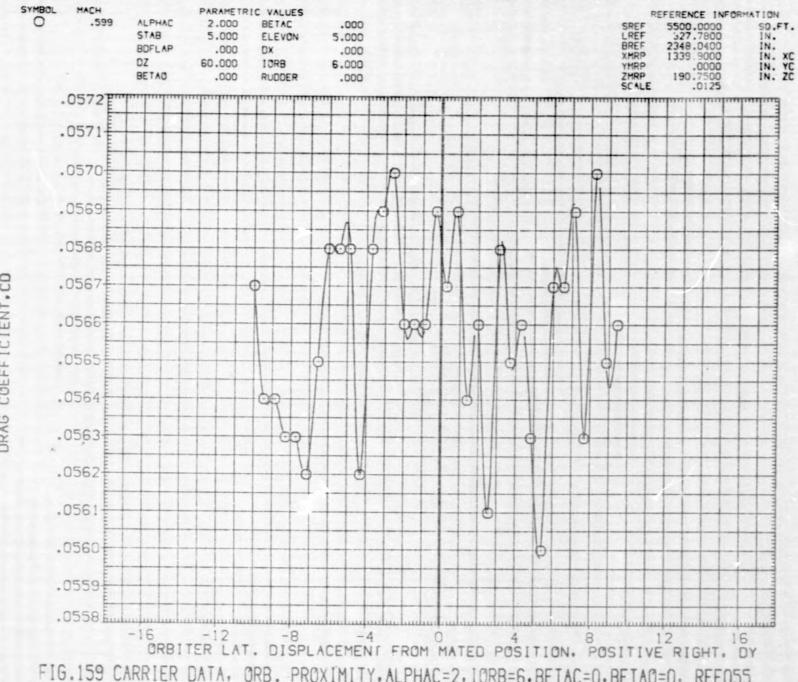
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE055)

FIG.159 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE055

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE055)

FIG.159 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE055

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE055)

FIG.159 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE055

FIG.159 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, RFE055

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE055)

FIG.159 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE055

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE055)

| SYMBOL	MACH	PARAMETRIC VALUES			
○	.599	ALPHAC	2.000	BETAC	.000
		STAB	5.000	ELEVON	5.000
		BDFLAP	.000	DX	.000
		DZ	60.000	IORB	6.000
		BETAO	.000	RUDDER	.000

REFERENCE INFORMATION
SREF   5500.0000   SQ.FT.
LREF   327.7800   IN.
BREF   2348.0400   IN.
XMRP   1339.9000   IN. XC
YMRP   .0000   IN. YC
ZMRP   190.7500   IN. ZC
SCALE   .0125

FIG.159 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE055

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE056)
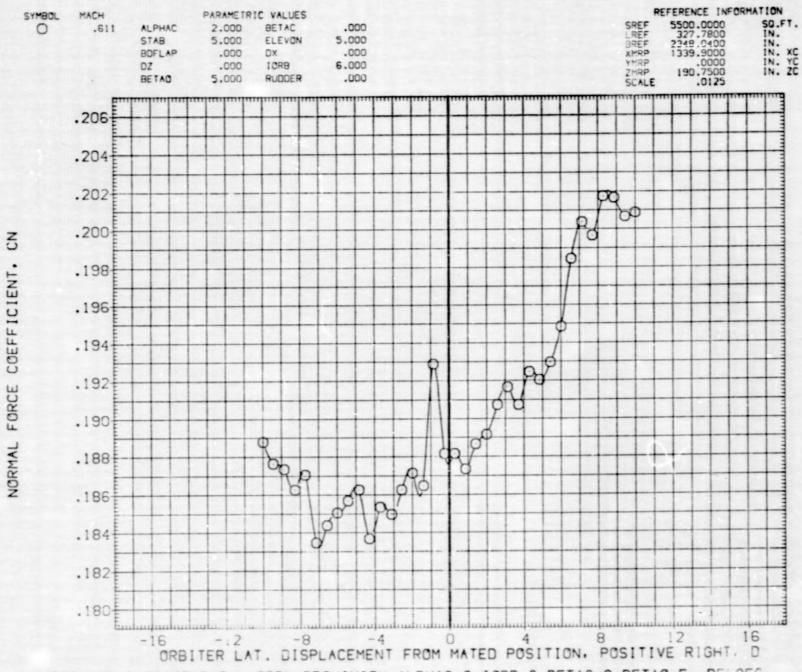
FIG.160 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=5, RFE056
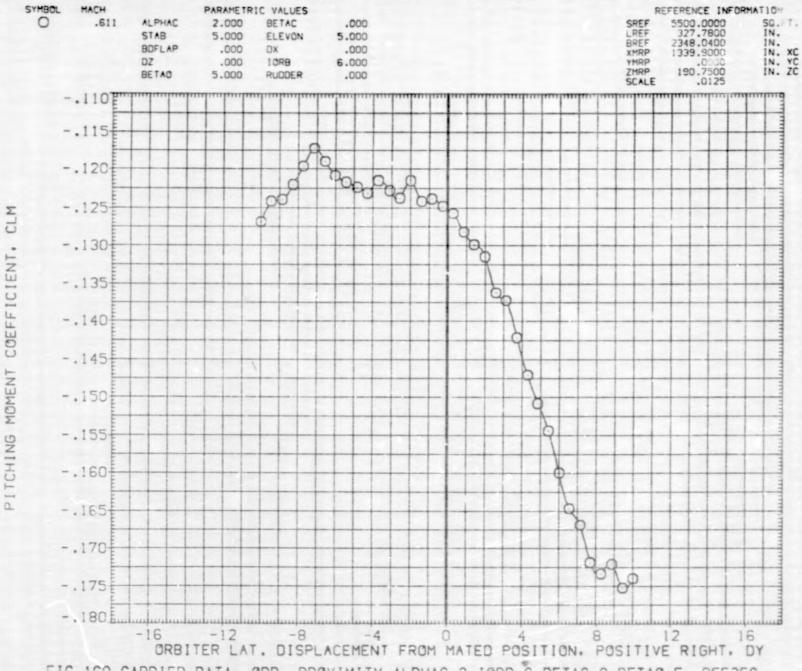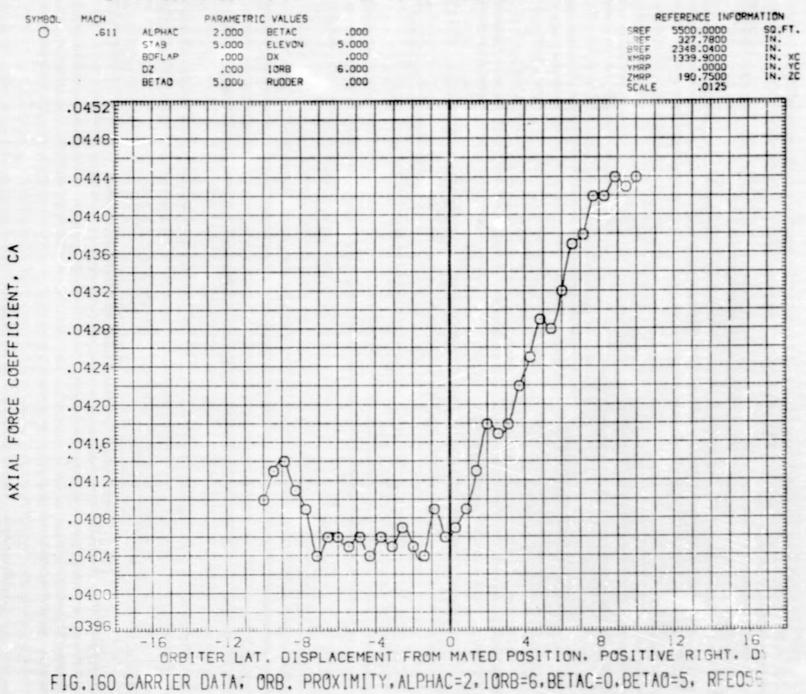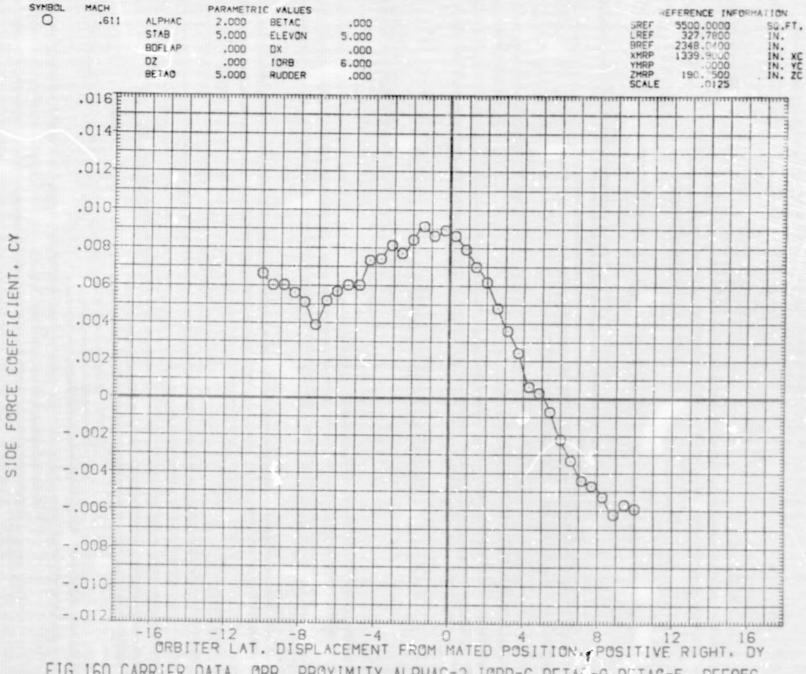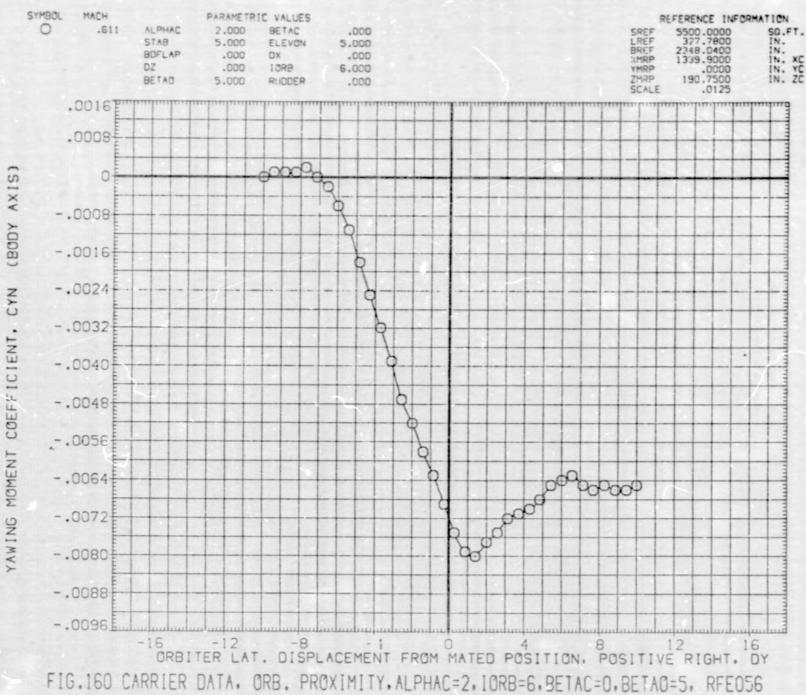
LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE056)

FIG.160 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE056

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE056)

FIG.160 CARRIER DATA; ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE056
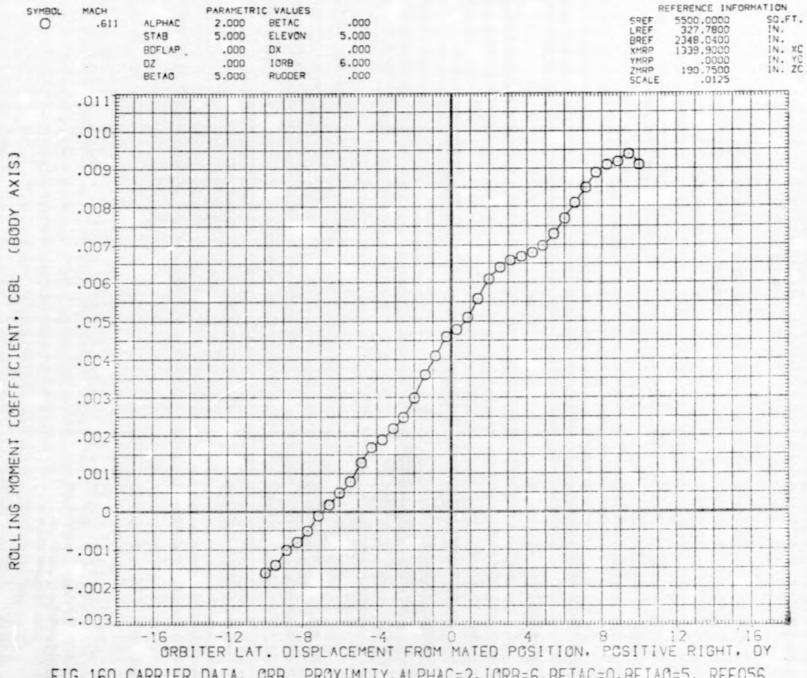
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE056)

FIG.160 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE056

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE056)

FIG.160 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETA0=5, RFE056

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE056)

FIG.160 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE056
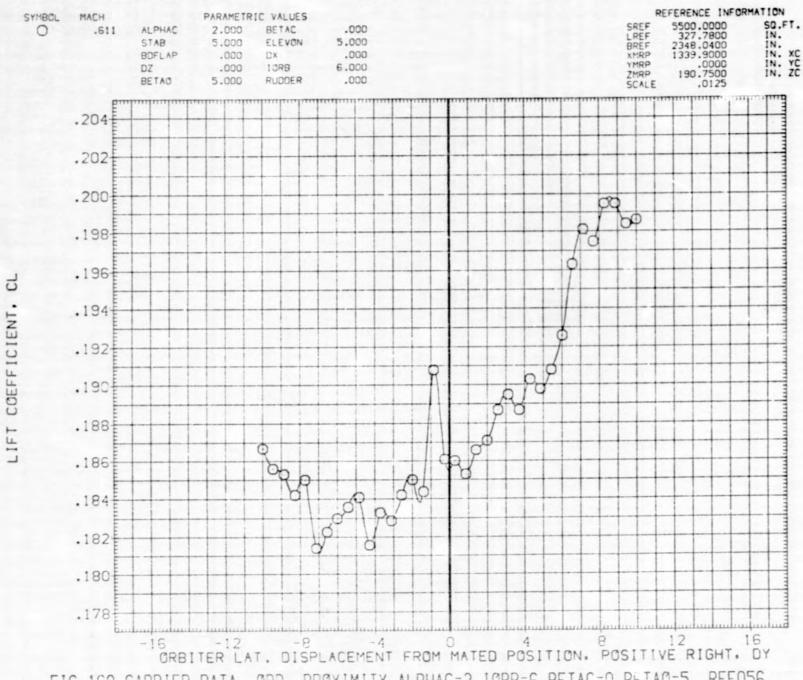
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE056)

FIG.160 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE056
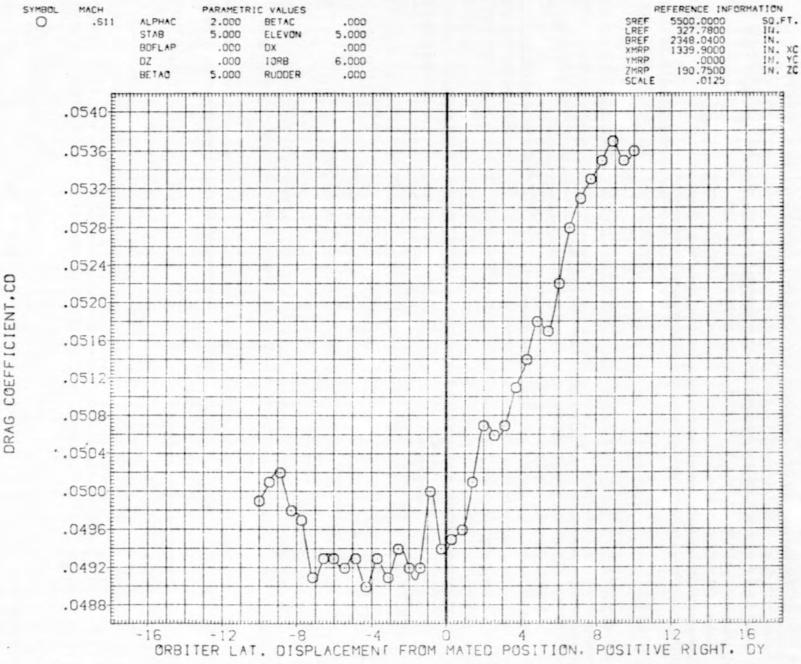
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE056)

FIG.160 CARRIER DATA, ORB, PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE056
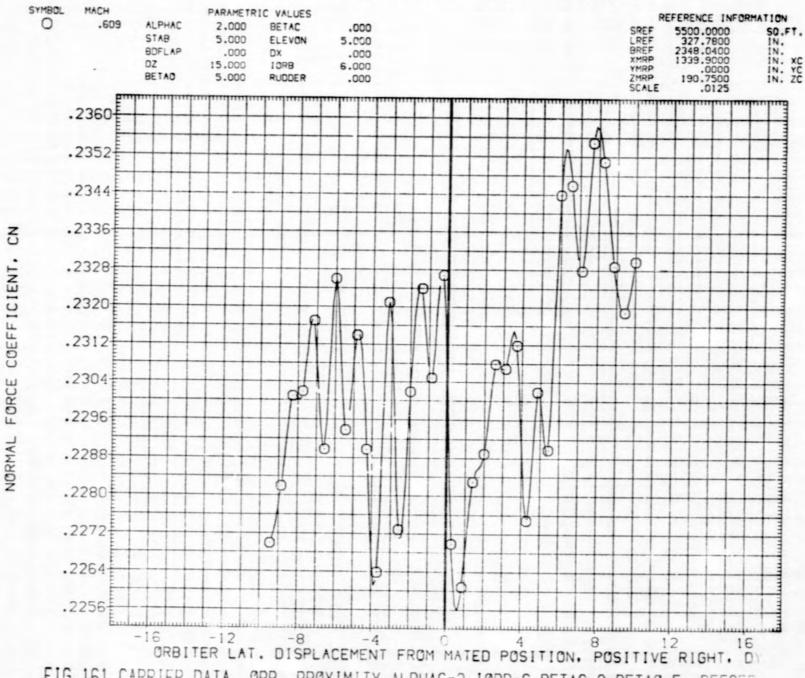
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE057)

FIG.161 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE057

FIG.161 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE057

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE057)

FIG.161 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE057

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE057)

FIG.161 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=5, RFE057

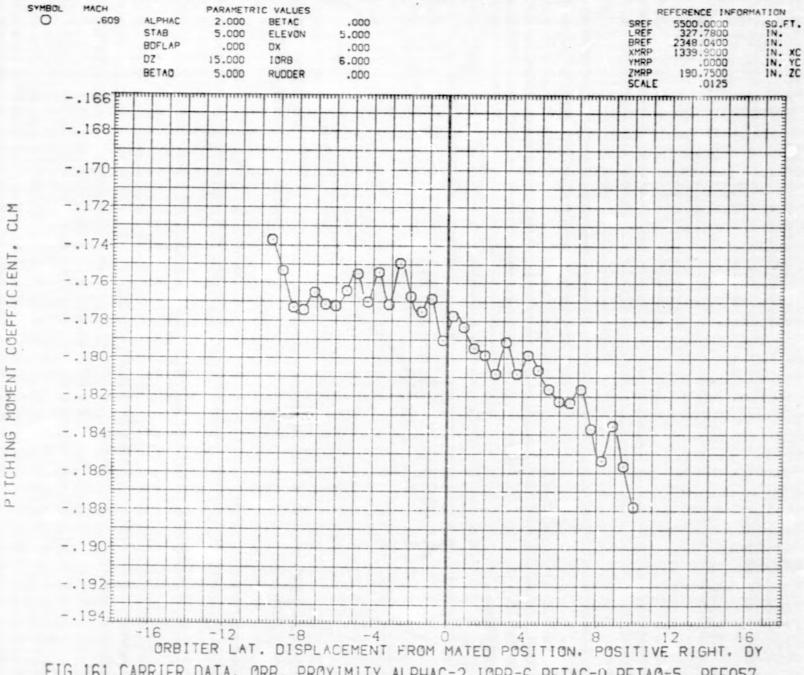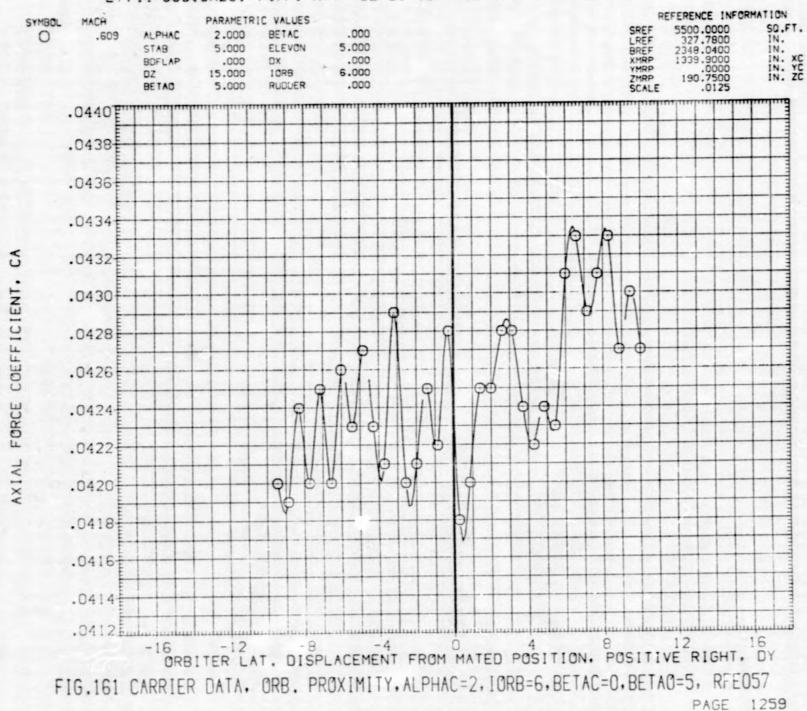LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE057)

FIG.161 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE057

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE057)

FIG.161 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE057

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LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE057)

LIFT COEFFICIENT, CL

ORBITER LAT. DISPLACEMENT FROM MATED POSITION, POSITIVE RIGHT, DY

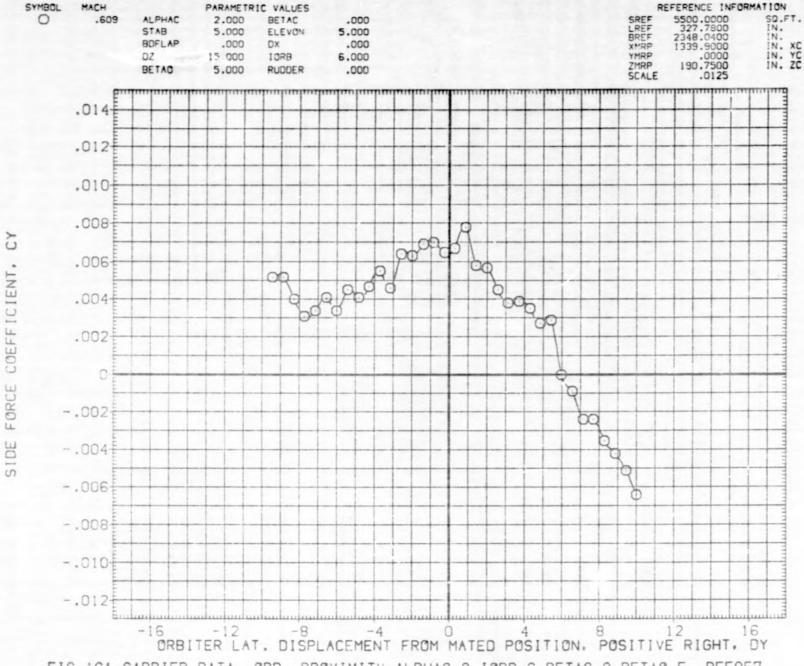FIG.161 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE057
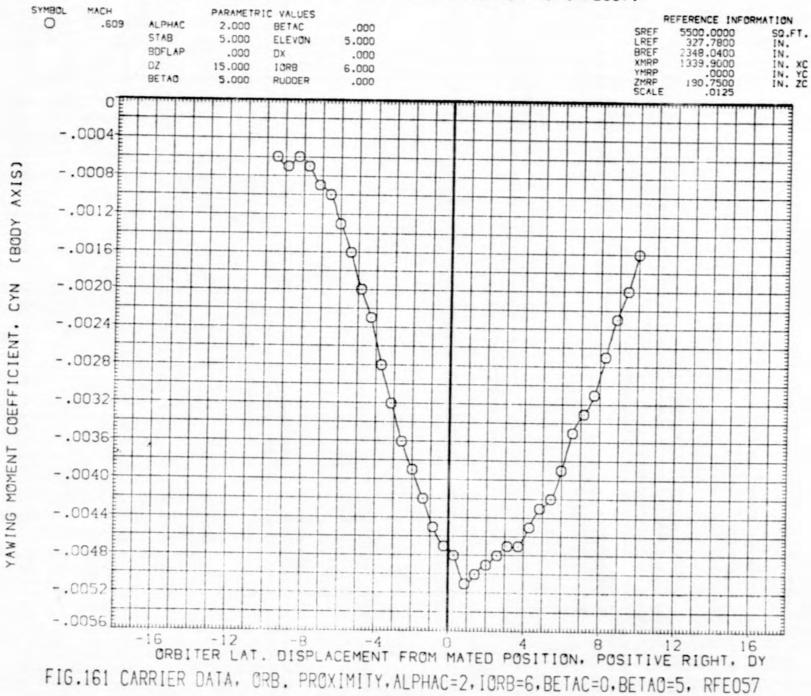
FIG.161 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFEO57

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE058)
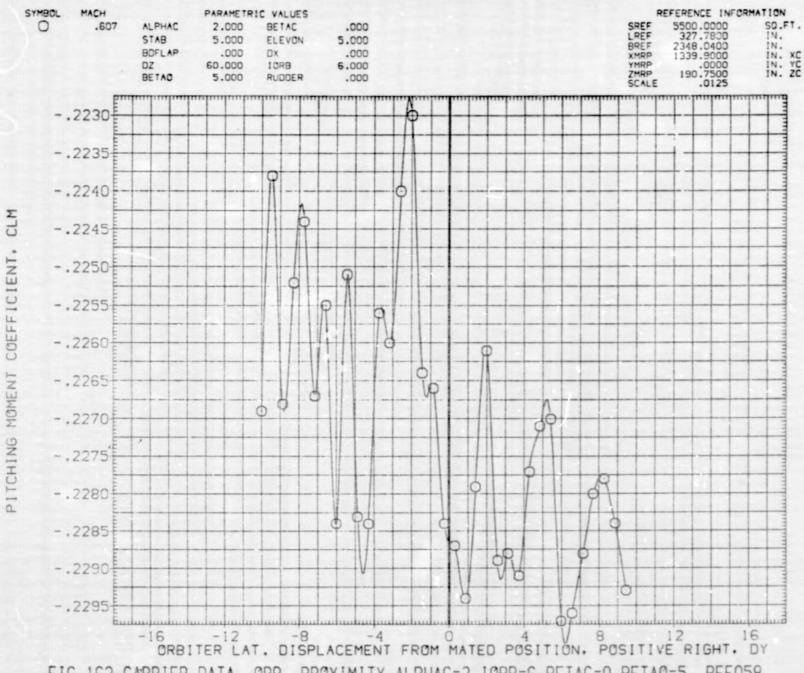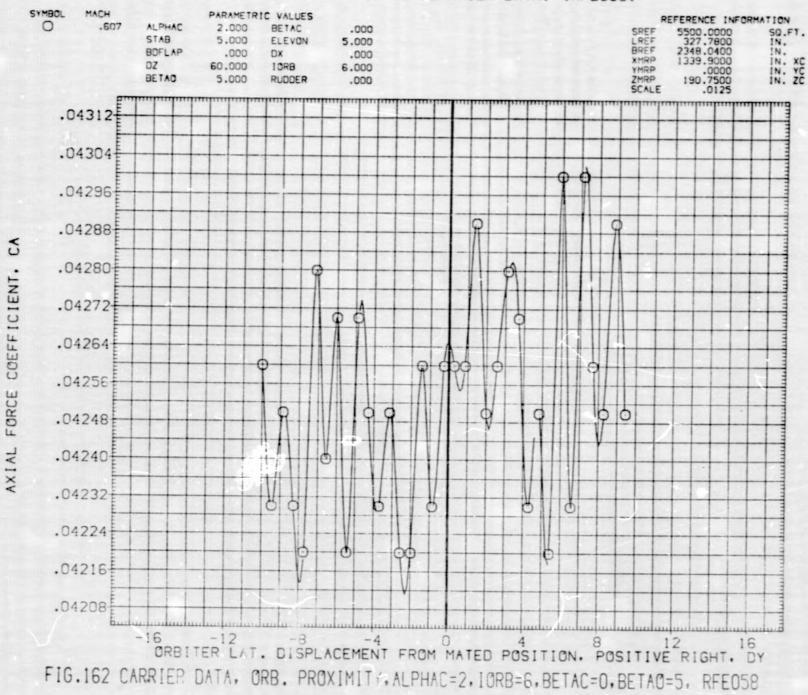
FIG.162 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE058
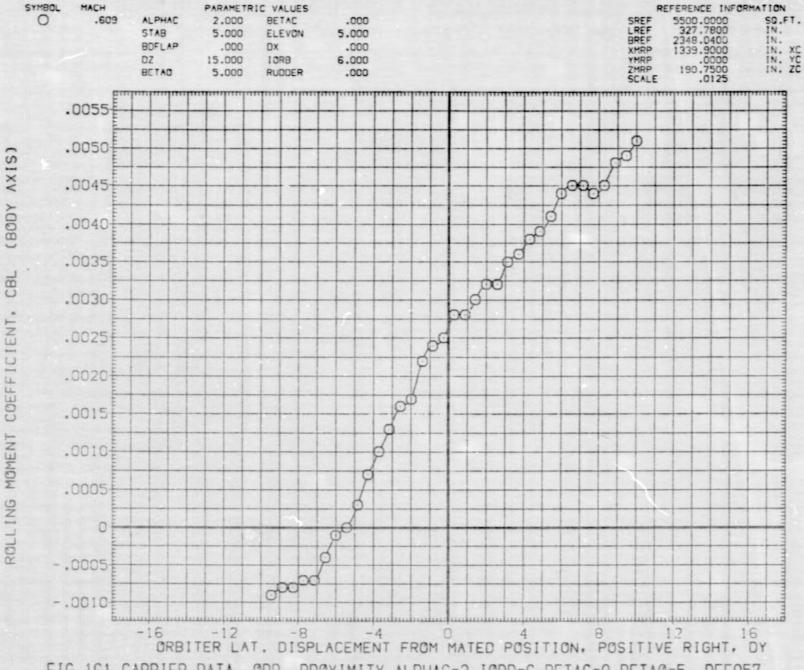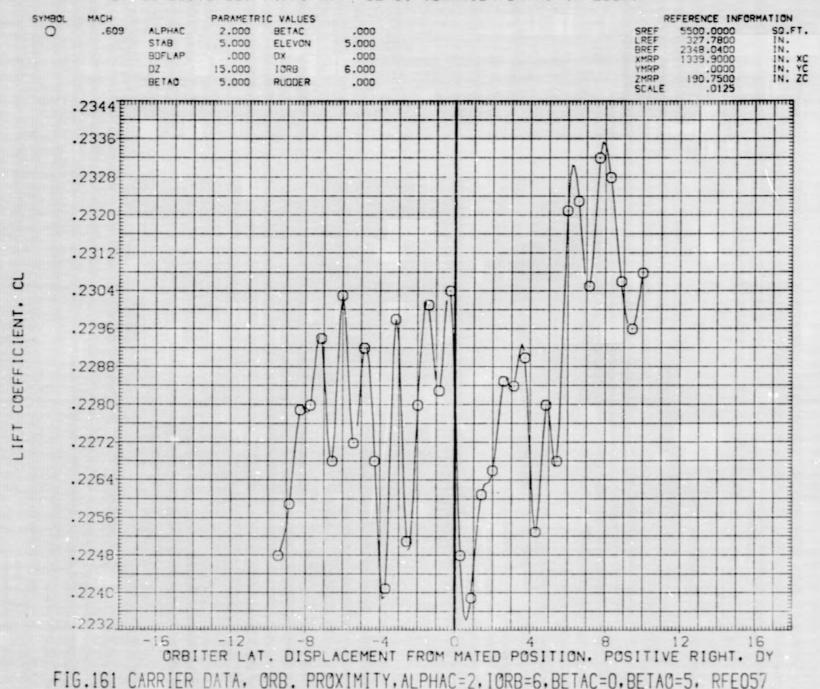
FIG.162 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE058

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE058)

SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.607	ALPHAC	2.000	BETAC	.000	SREF	5500.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000	LREF	327.7800	IN.
		BDFLAP	.000	DX	.000	BREF	2348.0400	IN.
		DZ	60.000	IORB	6.000	XMRP	1339.9000	IN. XC
		BETAO	5.000	RUDDER	.000	YMRP	.0000	IN. YC
						ZMRP	190.7500	IN. ZC
						SCALE	.0125	

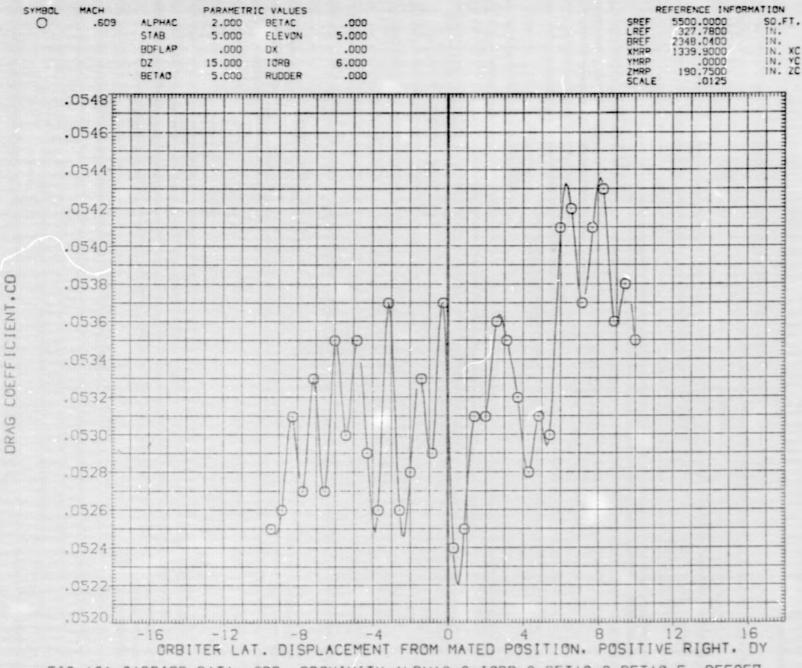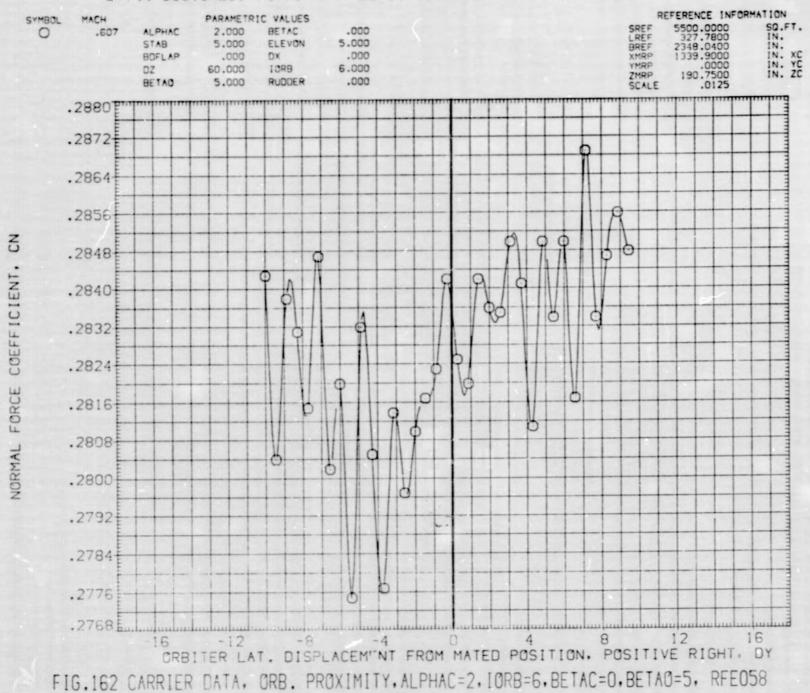FIG.162 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=5, RFE058

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE058)

FIG.162 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=5, RFE058

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE058)

FIG.162 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETA0=5, RFE058

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE058)

FIG.162 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE058

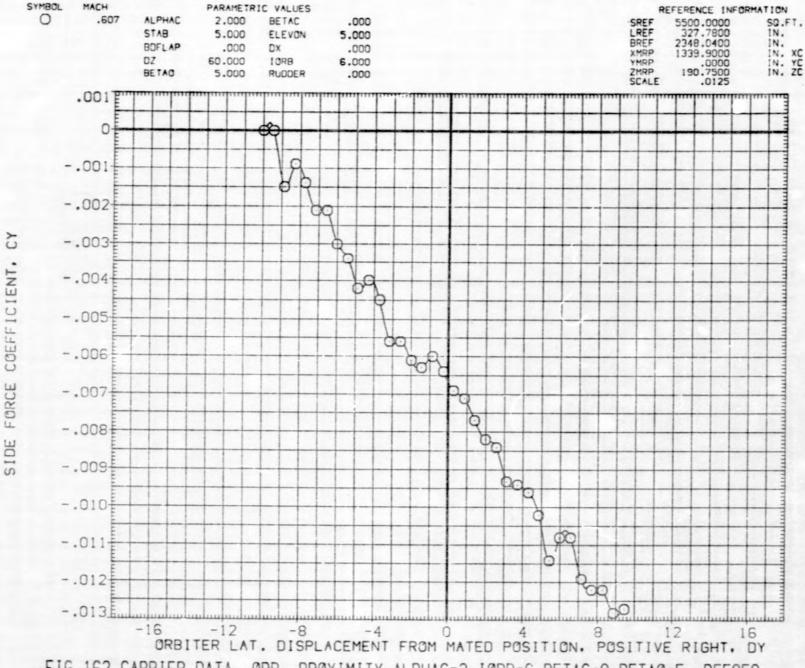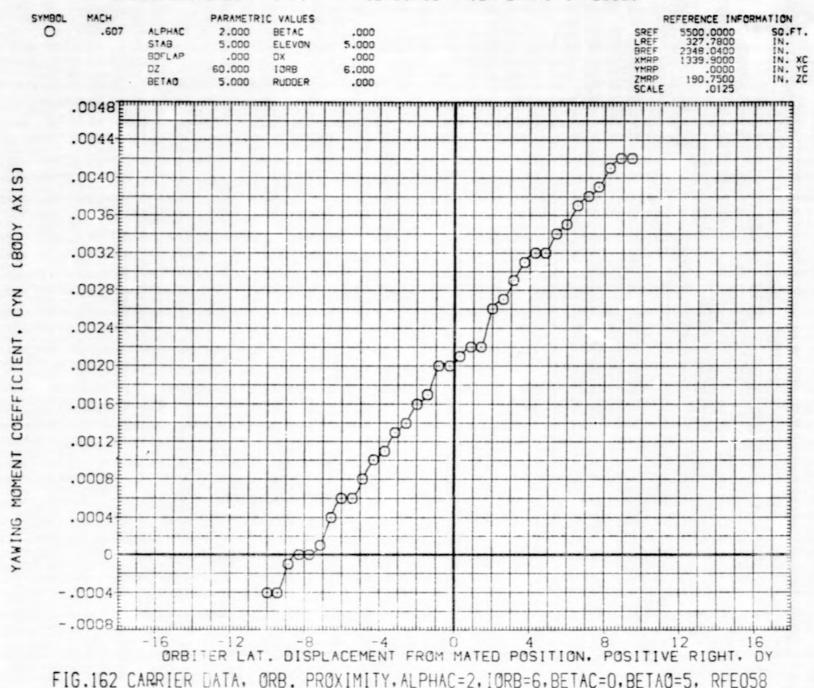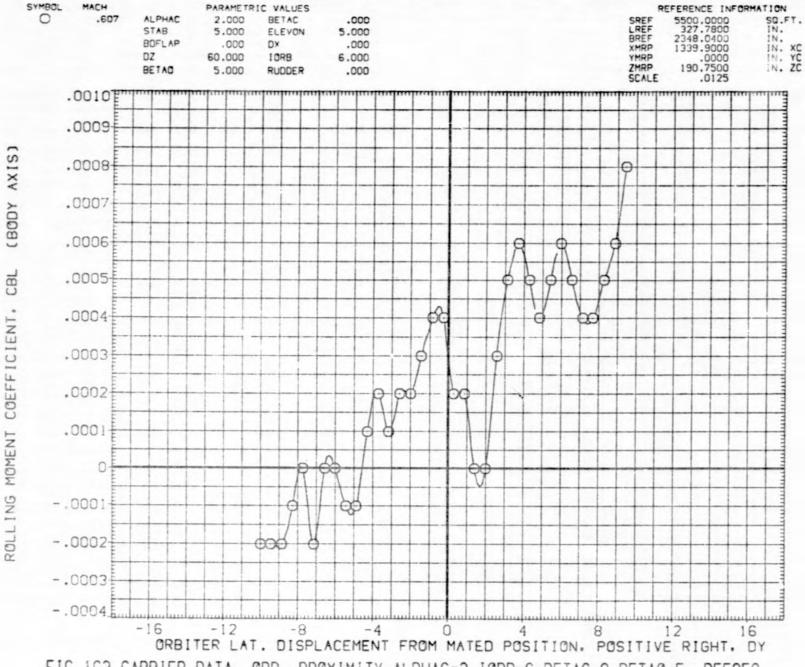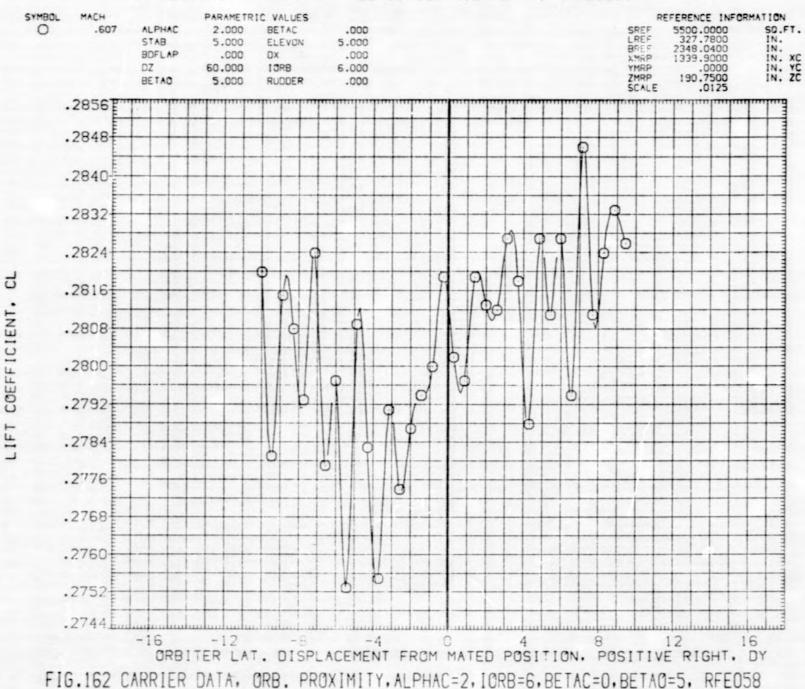LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE058)
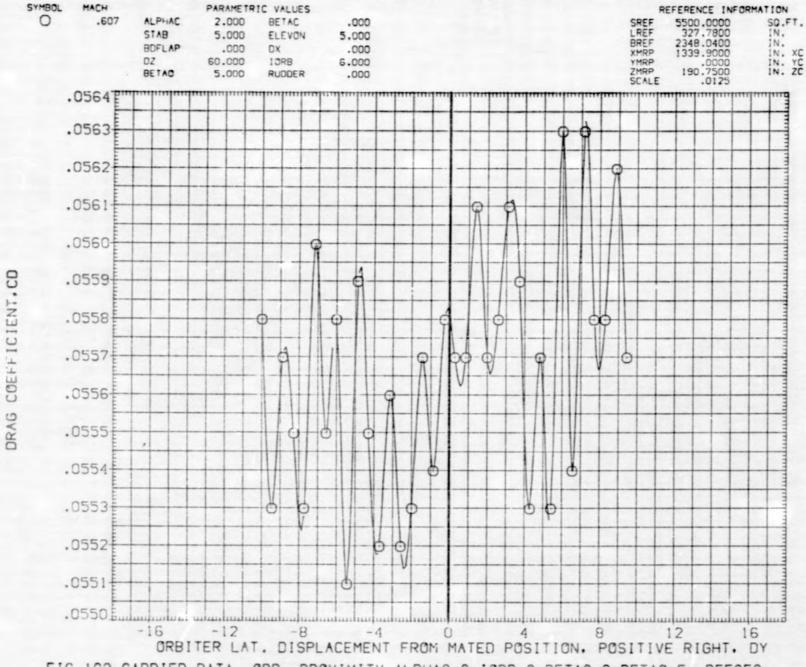
FIG.162 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE058

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE058)

FIG.162 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=5, RFE058

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SYMBOL   MACH
  O   .603

PARAMETRIC VALUES

ALPHAC	2.000	BETAC	.000
STAB	5.000	ELEVON	5.000
BDFLAP	.000	DX	10.000
DZ	.000	IORB	6.000
BETAO	.000	RUDDER	.000

REFERENCE INFORMATION

SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

FIG.163 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE059

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE059)

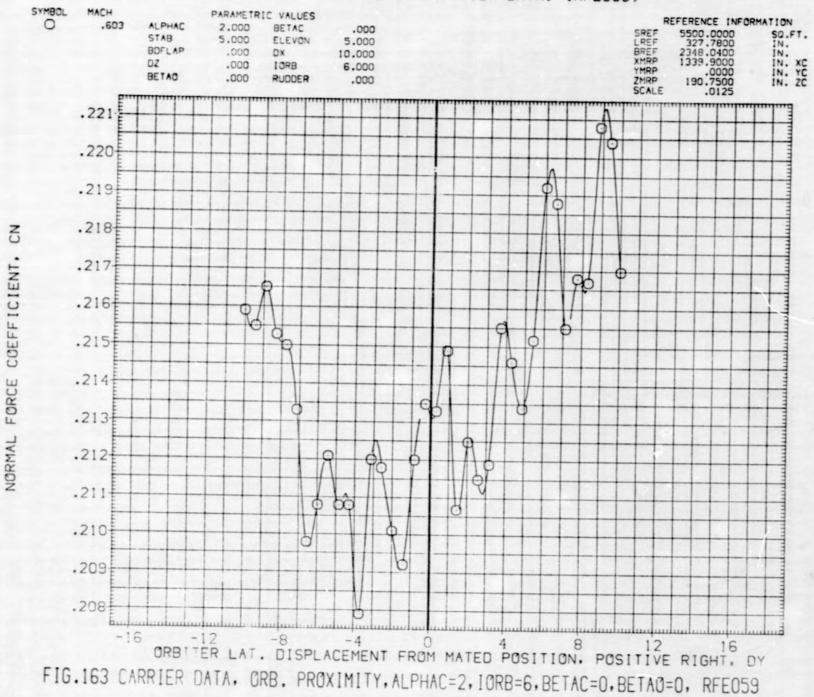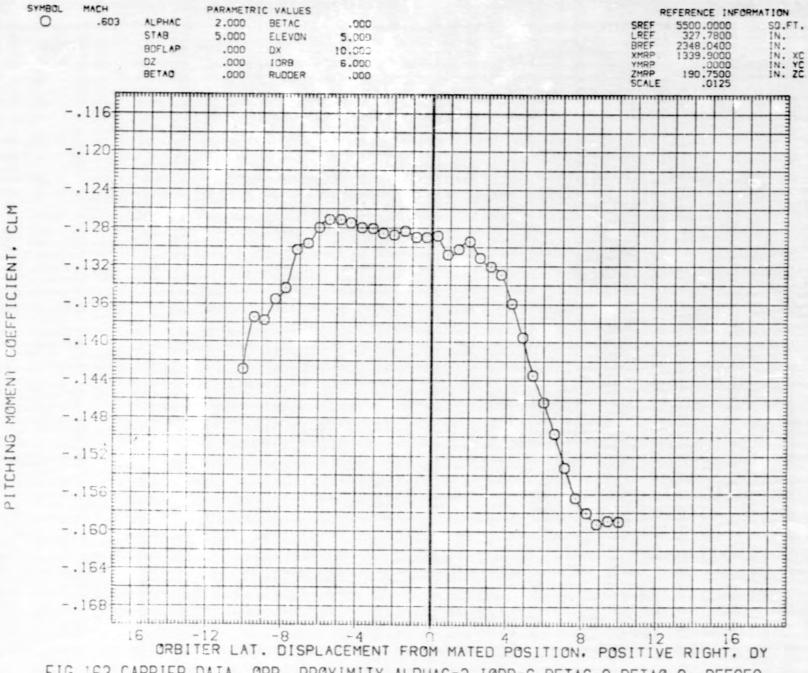FIG.163 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE059

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE059)

SYMBOL	MACH	PARAMETRIC VALUES			
○	.603	ALPHAC	2.000	BETAC	.000
		STAB	5.000	ELEVON	5.000
		BDFLAP	.000	DX	10.000
		DZ	.000	IORB	6.000
		BETAO	.000	RUDDER	.000

REFERENCE INFORMATION		
SREF	5500.0000	SQ.FT.
LREF	327.7800	IN.
BREF	2348.0400	IN.
XMRP	1339.9000	IN. XC
YMRP	.0000	IN. YC
ZMRP	190.7500	IN. ZC
SCALE	.0125	

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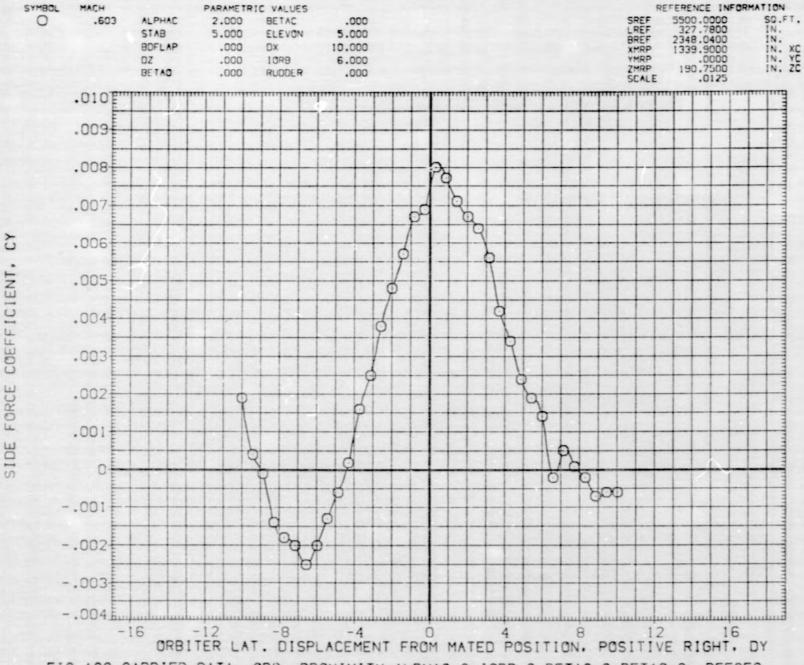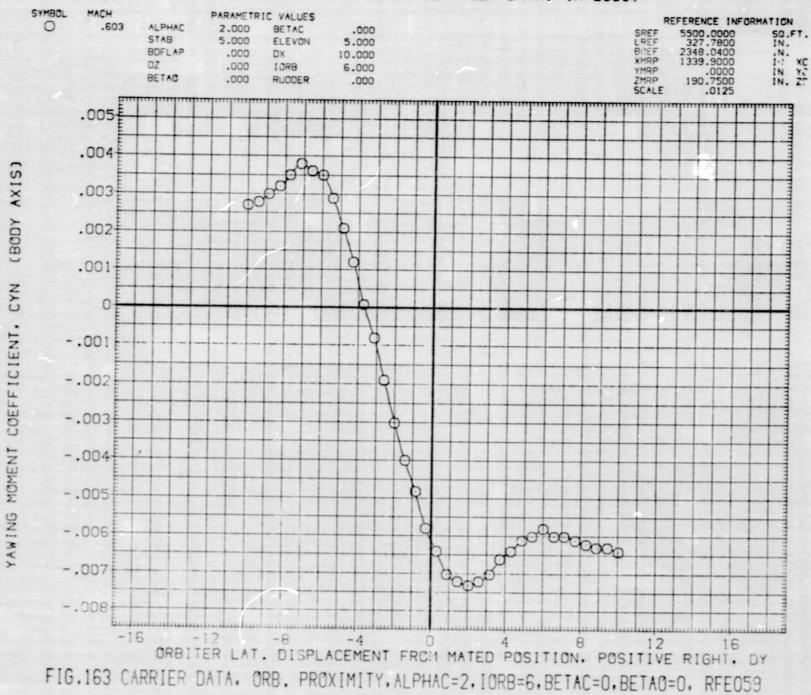ORBITER LAT. DISPLACEMENT FROM MATED POSITION, POSITIVE RIGHT, DY

FIG.163 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE059

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE059)
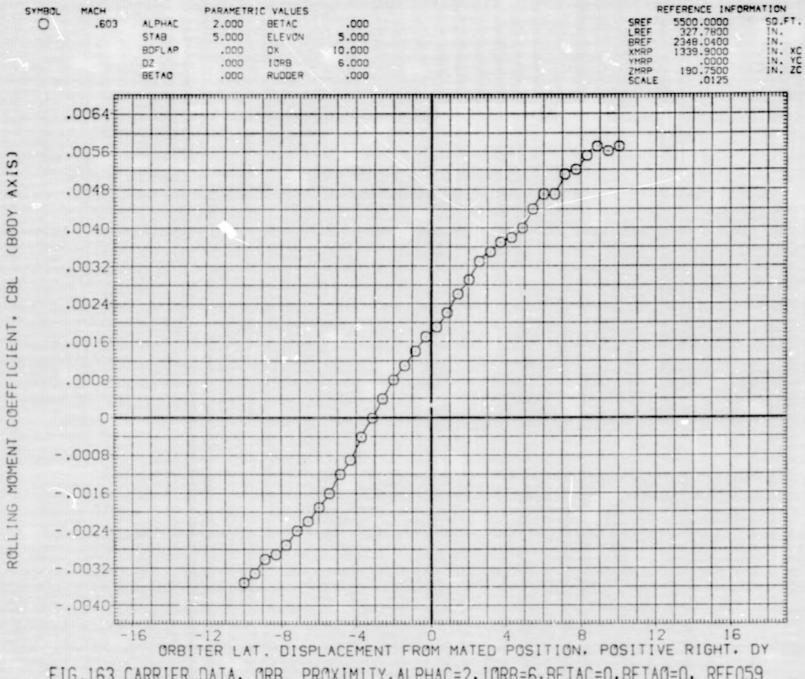
FIG.163 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE059

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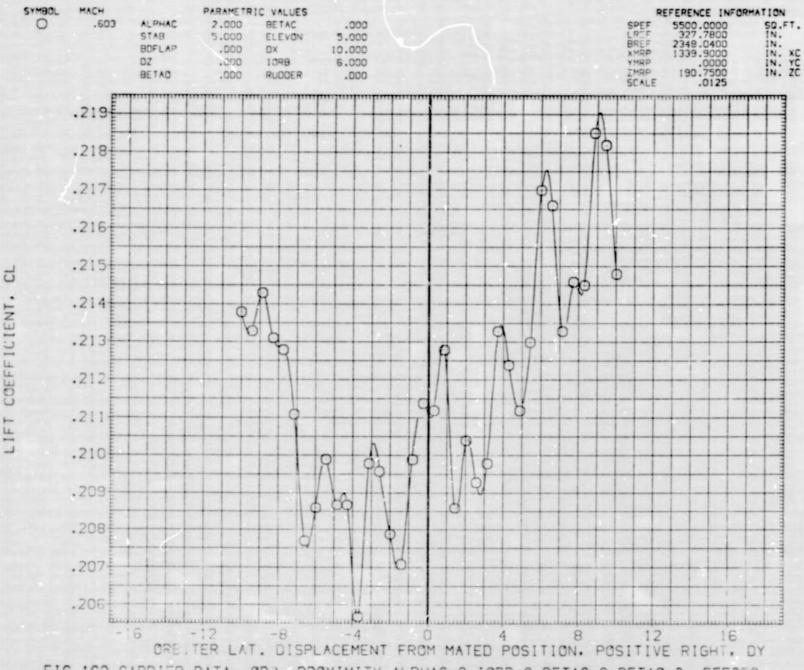
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE059)

FIG.163 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE059
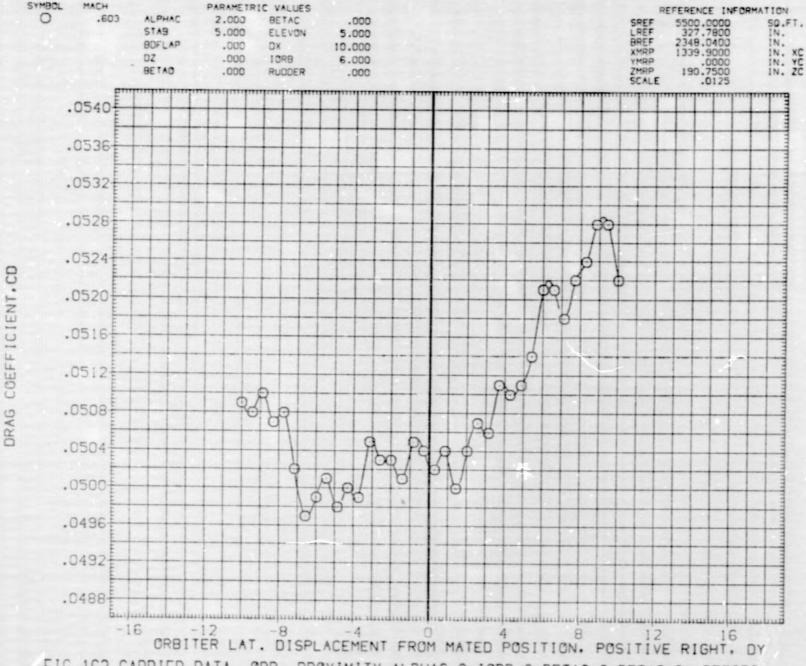
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE059)

SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O	.603	ALPHAC	2.000	BETAC	.000	SREF	5500.0000	SQ.FT.
		STAB	5.000	ELEVON	5.000	LREF	327.7800	IN.
		BOFLAP	.000	DX	10.000	BREF	2348.0400	IN.
		DZ	.000	IORB	6.000	XMRP	1339.9000	IN. XC
		BETAO	.000	RUDDER	.000	YMRP	.0000	IN. YC
						ZMRP	190.7500	IN. ZC
						SCALE	.0125	

FIG.163 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE059

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE059)

FIG.163 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETA0=0, RFE059
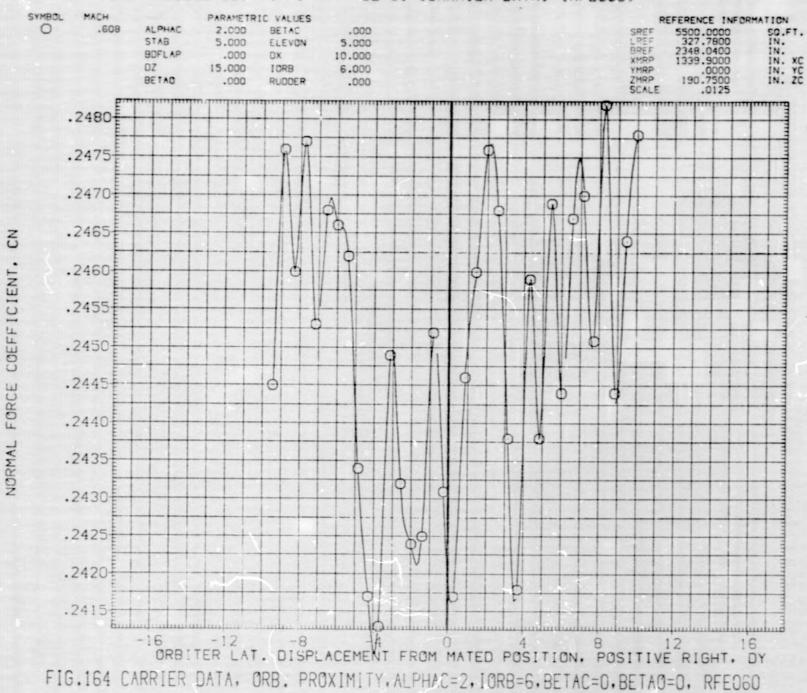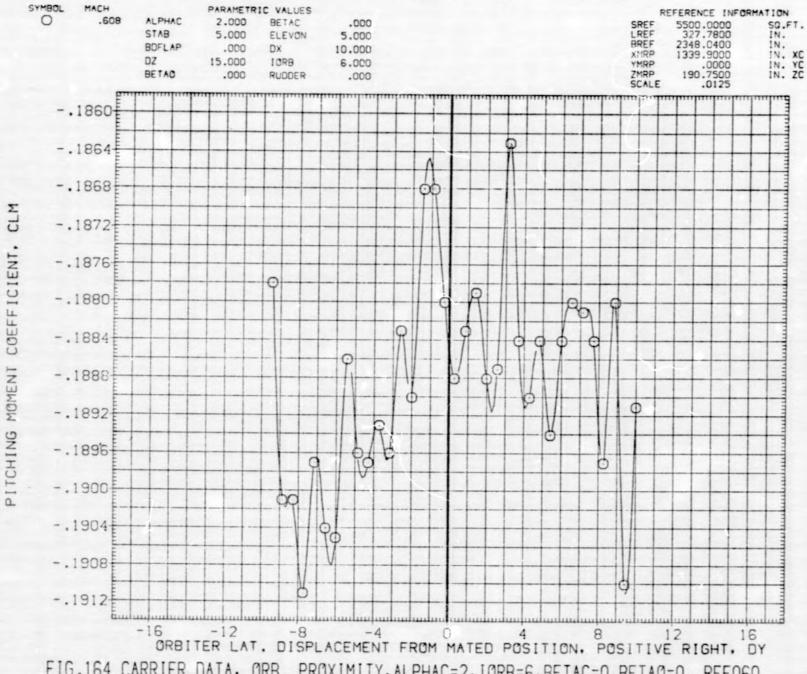
LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE059)

FIG.163 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE059

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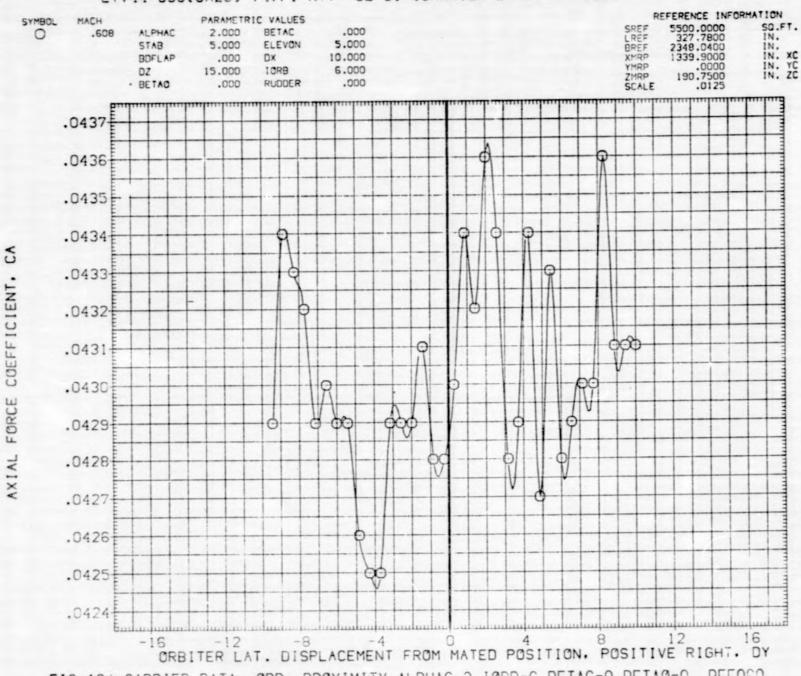
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE060)

FIG.164 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, RFE060
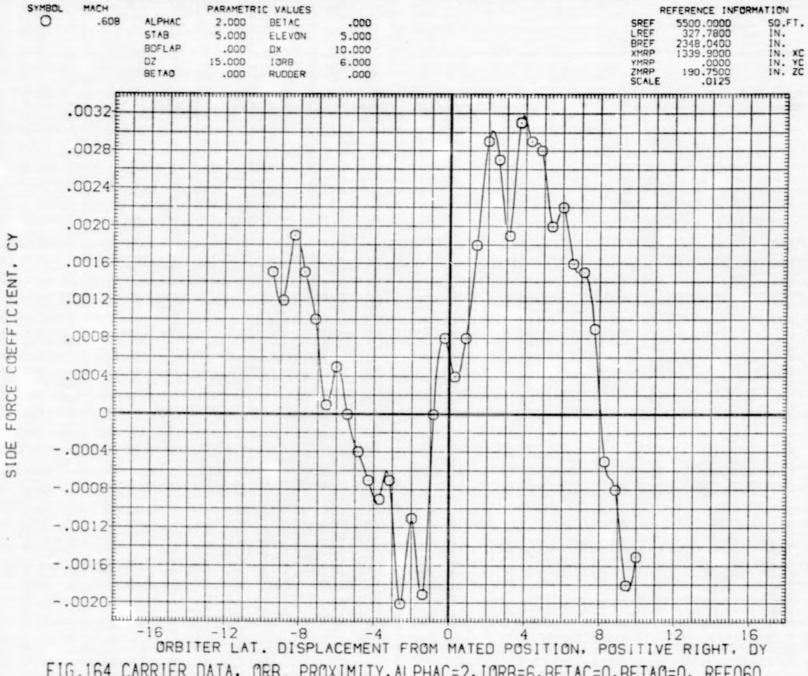
LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFEO60)

FIG.164 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFEO60

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE060)
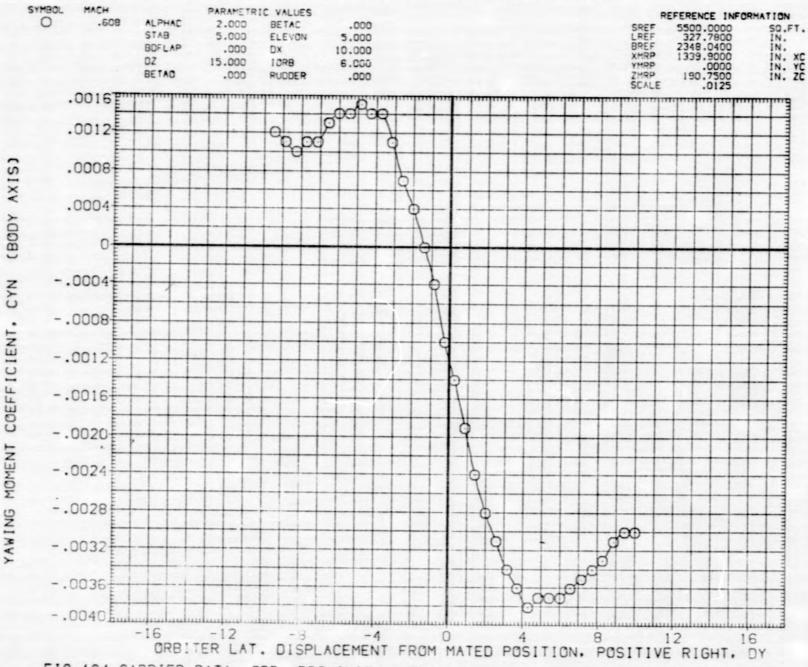
FIG.164 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE060

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE060)

FIG.164 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE060

LTV44-559(CA26) 747/1 ATY O2 S1 (CARRIER DATA) (RFE060)

FIG.164 CARRIER DATA, ORB. PROXIMITY, ALPHAC=2, IORB=6, BETAC=0, BETAO=0, RFE060
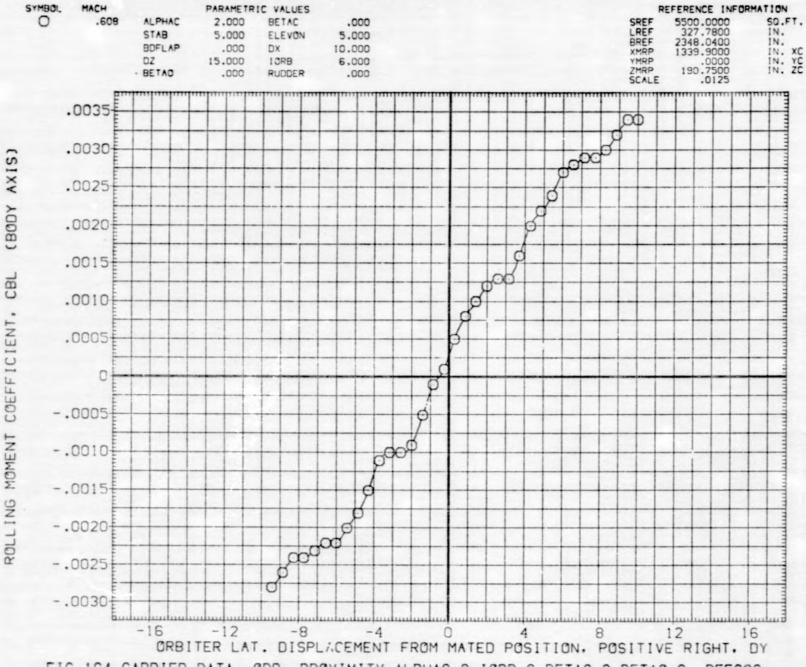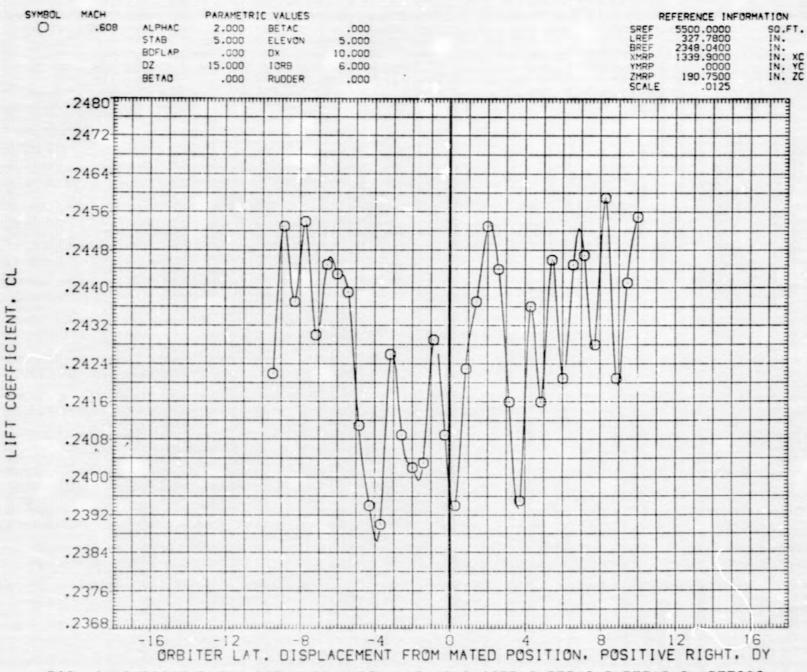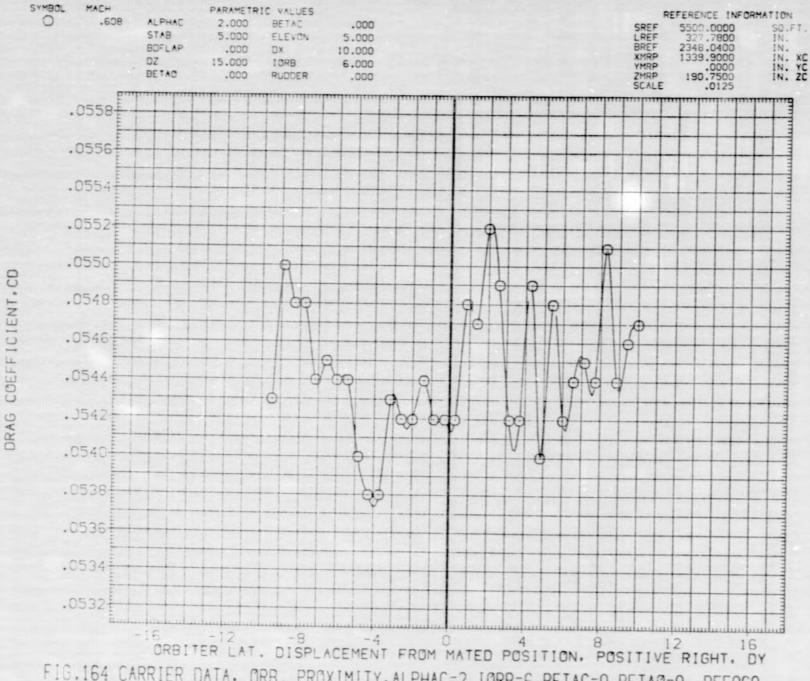
LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE060)

FIG.164 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE060

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LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE060)

FIG.164 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETA0=0, RFE060

LTV44-559(CA26) 747/1 ATY 02 S1 (CARRIER DATA) (RFE060)

FIG.164 CARRIER DATA, ORB. PROXIMITY,ALPHAC=2,IORB=6,BETAC=0,BETAO=0, RFE060

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